Learning Style and Meaning-making in Conversation

Patricia J. Jensen
David A. Kolb

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NEW DEVELOPMENTS IN LEARNING/COGNITIVE STYLE

Patricia J. Jensen
Associate Professor
Department of Business and Management
Alverno College
3400 South 43 Street
P.O. Box 343922
Milwaukee, WI 53234-3922
414-382-6321 (p)
414-744-0910 (f)
pjensen@execpc.com

David A. Kolb
Professor
Department of Organisational Behavior
Case Western Reserve University
10900 Euclid Avenue
Cleveland, OH 44106-7235
216-368-2050 (p)
216-368-4785 (f)
dak5@msn.com

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by

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This chapter describes how learning styles get expressed in conversation. We describe ways individuals engage in and make sense of their experience in conversations. We call these patterns of learning streams of meaning-making. These streams of meaning making were inductively generated from transcripts of in-depth interviews conducted with participants in a Ph.D. seminar based on conversational learning. These interviews asked participants to identify a conversation that stood out for them in the seminar and then analyse it through a structured interview protocol. This study was one part of a larger study on conversation (Jensen, 1995, Baker, 1995). The methodology was based on a naturalistic paradigm (Lincoln and Guba, 1989) to develop a grounded description of ways in which the participants made meaning and learned in and through conversation. Using a dialectic approach, the interview data was compared and contrasted with scholarly literature on learning, meaning-making, and conversation to identify patterns of meaning-making grounded in the experience of the participants. The streams of meaning-making thus identified were then related to participants' scores on the Learning Style Inventory (Kolb, 1985). Three
broad ideas have given shape to this study, experiential learning, meaning-making and conversation.

**Experiential Learning**

Learning is broadly defined as the major process of human adaptation, as the way we make meaning from experience (Kolb, 1984). This view of learning gives equal importance to direct experience, the ways we apprehend reality, and to the more abstract and conceptual ways of knowing, the ways we comprehend reality. Knowing through concrete experience is called apprehension, an immediate, feeling-oriented, tacit, subjective process largely based in older regions of the human brain that have ensured human survival for millions of years. The process of knowing through abstract concepts is called comprehension, a linguistic, conceptual, interpretive process based largely in the relatively 'new' left cerebral cortex that is only thousands of years old. How we learn is based on the complex interrelationships of these two knowing processes. Giving equal importance to knowing through experience and knowing through more objective and cognitive stances, experiential learning theory is a dual knowledge theory based upon both appreciative and critical ways of knowing.
Experiential learning is conceptualised as a four-stage iterative cycle that focuses on the ways in which learners grasp and transform experience. The grasping orprehension dimension is a dialectic between apprehension or concrete experience, an affective subjective involvement in the present and comprehension or abstract conceptualisation, an abstract, objective detachment that is not bound to the present. The dialectic of the knowing dimensions might best be expressed as integrated knowing (Baker et al. 1998).

The transformation dimension in Kolb's model is a dialectic between intention or reflective observation, a reflective stance to viewing a situation from diverse perspectives and extension or active experimentation, taking action to influence a situation. This dialectic may be considered as praxis (Freire, 1992). Reflection informed by action and action informed by reflection. Thus for learning to occur and knowledge to be created, experience must be both grasped and transformed.

Since experience can be both grasped and transformed in two dialectically different ways, four distinctive approaches to learning result. These are: a diverging learning style that emphasises concrete experience and
reflective observation; an assimilating learning style that emphasises abstract conceptualisation and reflective observation; a converging learning style that emphasises abstract conceptualisation and active experimentation, and an accommodating learning style that emphasises concrete experience and active experimentation. Experiential learning gives co-equal importance to grasping experience through direct apprehension and through abstract comprehension.

William James' philosophy of radical empiricism was based on two co-equal ways of knowing the world, 'knowledge of acquaintance,' is based upon direct perception of our world and 'knowledge about' is based upon mediating conception. James (1977) draws attention to the importance of this co-equal relationship. (243)

We thus see clearly what is gained and what is lost when percepts are translated into concepts. Perception is solely of the here and now; conception is of the like and unlike, of the future, and of the past, and of the far away. But this map of what surrounds the present, like all maps, is only a surface; its features are but abstract signs and symbols of things that in
themselves are concrete bits of sensible experience. We have but to weigh extent against content, thickness against spread, and we see that for some purposes the one, for other purposes the other has the higher value. Who can decide off hand which is absolutely better to live and to understand life? We must do both alternately, and a man can no more limit himself to either than a pair of scissors can cut with one of its blades. (243)

Drawing on James' radical empiricism, Kolb defines the relationship between apprehension and comprehension as putting apprehension on an equal footing with knowing by comprehension. From this perspective, knowledge emerges from the dialectic relationship between the two forms of knowing.

This dialectic relationship is the Hegelian dialectic, in which contradictions and conflicts are borne out of both logic and emotion in a thesis and antithesis of mutually antagonistic convictions (102).

Knowing by apprehension is focused in the present, in the here-and-now, existing in the 'continuously unfolding present movement of apparently limitless depth' (102). Comprehension is a 'record of the past that seeks to define
the future' (102). Apprehension is transformed by appreciation and comprehension is transformed by criticism. Apprehension of experience is a personal subjective process that cannot be known by others except by the communication to them of the comprehensions used to describe immediate experience. Comprehension, on the other hand, is an objective social process, a tool of culture. This leads to two kinds of knowledge: personal knowledge, the combination of direct apprehensions of experience and the socially acquired comprehensions used to explain this experience and guide actions; and social knowledge, the independent, socially and culturally transmitted networks of words, symbols and images that are based solely on comprehension (105).

**Meaning-Making**

During the past several decades the idea of constructivism has influenced the discourses of varied disciplines in the West. Constructivism represents a set of beliefs that as human beings we constitute or construct reality. Individuals are viewed as active shapers of rather than as passive absorbers of an already organised reality.
In *The Mechanism of the Mind* (1969), Edward de Bono offers a simple metaphor for the way in which the brain becomes mind. He likens the memory surface of the mind to 'ordinary table jelly made up in a shallow pan' (97). Incoming information is hot water spooned onto the surface in different places. Over time, the surface is sculpted and contoured into a unique form depending upon where the hot water has been placed and the ways in which the surface interacts with the water. As patterns develop, depressions and channels are formed, some depressions deeper than others, if more hot water has been placed on or near that particular spot.

One of the implications of the interaction between incoming information and the patterns that exist on the memory surface is that the memory surface may be presented with large amounts of information coming from both inside and outside the individual. In this situation:

when a large pattern is put on the surface, only a small part of the pattern is retained, the rest is simply ignored...A limited attention span means that much is left out, but it also means that something is actually selected ... Selection means preference and
choice instead of total acceptance of all that is offered. (88-89)

It is this selection process that explains that the same situation may appear completely different to two different people because the contours of their memory surfaces are such that the selected attention area or sequence of attention areas are very different.

Viewing the contours of the memory surface as a 'sculpted record of all that has happened on the surface' (97), these previously developed patterns are the ones used to process incoming information. Thus the past organises the present. For de Bono, 'learning is a matter of putting a new pattern on the surface or changing an established one' (274).

We appreciate this graphic image of the process of an individual's 'brain becoming mind' in part because it so clearly conveys one image of the complex process of the development of cognitive styles, illustrates individual differences and simply defines learning.

These individual differences have significance for human interaction and the varied perspectives held within any interactive process. Rosenblatt (1993), draws upon the
work of Dewey and Bentley who suggested that the term 'interaction' was tied to the Cartesian dualistic paradigm that treats 'human beings and nature, subject and object, knower and known, as separate entities' (380). She takes the view that no sharp distinction can really be made between perceiver and perceived, since the observer is always, in some way, involved in any given observation. She carries this position to literary works where she maintains that a reader and text are in relationship within a particular context. Rosenblatt characterises two distinctive stances a reader or writer may take toward the 'contents of consciousness' that guide their choice of what they attend to, what they select out and synthesise from among all the elements 'stirred up in the stream of consciousness during the transaction with the text' (382-383). She defines one stance as the aesthetic where 'attention is focused primarily on experiencing what is being evoked, lived through' (383) during the reading. The other stance she defines as the efferent in which one is primarily involved with 'analysing, abstracting and accumulating what will be retained' (383) after the reading.
These stances exist along a continuum because as human beings:

We don't have the cognitive, the referential, the factual, the analytic, the abstract on one side and the affective, the emotive, the sensuous on the other. Instead, both aspects of meaning—which might be termed the public and the private—are always present in our transactions with the world. The difference lies in the 'mix'...But always there is an individual human being choosing, selectively constructing meaning, and consciously or unconsciously responding in terms of the factors, contextual and human, entering into that particular transaction. (383-384)

Cultures develop and institutionalise specific means to ensure that accumulated knowledge and wisdom, norms and values, ethos and beliefs are conveyed from one generation to the next generation. One's culture provides a broad context for meaning making. Bruner's (1990) perspective is that to appreciate the human condition, it is more important to understand the ways we as human beings construct our
worlds than it is to establish the 'ontological status of
the products of these processes.' Stating his 'central
ontological conviction' he holds 'that there is no
aboriginal reality against which one can compare a possible
world in order to establish some form of correspondence
between it and the real world' (46).

Bruner describes two broad modes of thought, that
provide distinctive ways of ordering experience, of
constructing reality. These modes of thought typify the
sciences and the humanities and are similar to Wilhelm
Dilthey's Naturwissenschaften and Geisteswissenschaften, the
sciences of nature and of humanity. The first seeks
generality and the second uniqueness. The first is guided
by the methods of science and logic and the second by a
search for the meaning of historical and personal events in
their full comprehensive richness. He characterises the aim
of science in world making as attempting to 'make a world
that remains invariant across human intention and human
plights... achiev[ing] universality through...context
independence' (50). He characterises the aims of the
humanities as 'deal[ing] principally with the world as it
changes with the position and stance of the viewer
...achieving universality through context sensitivity.' (50)

Charles Taylor, in his study of modern identity, Sources of the Self (1989), describes the differences between the Cartesian and Montaignean forms of individualism. For Montaigne, what is central is self-discovery, identifying an individual in their uniqueness and originality. Taylor characterises this approach as 'entirely a first-person study, receiving little help from the deliverances of third-person observation, and none from 'science' (181). Descartes' theory places responsibility on the individual thinker to 'build an order of thought for himself, in the first person singular. But he must do so following universal criteria; he reasons as anyone and everyone (182). Each of these approaches turns individuals inward as they try to bring some order to the soul. However their aims and methods are quite distinctive. Where Descartes calls for a 'radical disengagement from ordinary experience' (182), Montaigne requires 'a deeper engagement in our particularity' (182). Taylor states that these two facets of modern individuality have been at odds up to the present.
Conversation

During the past several years, scholars from diverse disciplines have defined conversation and thought as being causally related. From this perspective, we can think because we can talk and the conversation that takes place within us is viewed as reflective thought. Michael Oakeshott, (1962) describes our ability to engage in unending conversation as what makes us civilised human beings.

According to Clark (1990), philosophy, cultural anthropology, literary theory, rhetoric, communication and composition studies use three terms to describe a process of discursive exchange, dialogue, dialectic, and conversation. Clark suggests that the term dialogue can be used to describe any exchange of assertions and responses. He refers to dialectic as describing a particular kind of dialogue, one in which its participants collaborate in constructing and revising knowledge they can share. (20)

Martin Buber (1947) describes the essence of our humanity as being dialogical. For Buber, genuine dialogue takes place when each person in the dialogue has the other
in mind, thus creating a mutual relationship of integrity, rather than relying solely on their own resources.

Paulo Freire (1993) describes dialogue as an encounter between persons that is 'mediated by the world, in order to name the world.' He refers to such dialogue as 'act of creation' where the word and the world encounter each other. For Friere, 'the true word' always includes the dialectical dimensions of reflection and action. Thus, Freire views reflection without action as verbalism and action without reflection as activism. For true dialogue to exist, one needs 'profound love for the world and for people' (70); humility; intense faith in humankind; hope, and critical thinking that perceives reality as process, as transformation.

In describing his conception of dialogue as thought, David Bohm (1989) returns to the Greek roots from which it comes, dialogos--logos means 'the word' and dia means 'through.' Expanding upon this definition, he describes dialogue as a 'stream of meaning flowing among and through us and between us.' (1) For Bohm, dialogue is a way to share a common consciousness in which those in dialogue suspend carrying out their impulses and suspend their assumptions in
order to look at them, to listen to other's opinions and see meaning, thereby sharing a common content. He emphasises that in dialogue, individuals realise what is on each other's mind but do not need to make judgements or come to conclusions because what is central is this sharing of consciousness. Making a distinction between truth and meaning, Bohm's perspective is that truth does not emerge from simply sharing opinions. Truth may be arrived at through dialogue; however, dialogue creates a space for meaning, meaning that is shared and coherent.

Diverse writers have described conversation, one of the ways we most frequently interact with others, like dialogue. A good conversation, according to Jane Roland Martin (1985) is 'neither a fight nor a contest.' She describes its shape as: 'Circular in form, co-operative in manner, and constructive in intent, it is an interchange of ideas by those who see themselves not as adversaries but as human beings, come together to talk and listen and learn' (10).

Peter Berger and Thomas Luckman (1966) describe conversation as 'the most important vehicle of reality-maintenance' (152). As in descriptions of dialogue, these characterisations of conversation emphasise the face-to-face
co-operative interaction between individuals as a way they make sense of their experience.

For Parker Palmer (1990), to be 'in truth' means being involved in an 'eternal conversation about things that matter, conducted with passion and discipline...truth is not in the conclusions so much as in the process of conversation itself...if you want to be 'in truth' you must be in the conversation (12).

Belenky (1986) and her colleagues referred to a conversational process as they identified distinctive ways of knowing in their study of women. Constructivists, for whom '[all knowledge is constructed, and the knower is an intimate part of the known' (137), make a distinction between 'really talking' and didactic talk, in which participants report experience rather than joining together to arrive at a new understanding. In 'real talk,' each participant reaches deep into her experience and uses her analytical abilities. For these women authentic conversation includes 'discourse and exploration, talking and listening, questions, argument, speculation, and sharing' (144). It is the capacity for 'speaking with and listening to others while simultaneously speaking with and
listening to the self [that] is an achievement that allows a conversation to open up between constructivists and the world' (145). 'Real talk' is characterised by reciprocity and co-operation, domination is absent.

Similarly, Kenneth Bruffee (1993) distinguishes between foundational and nonfoundational understandings of knowledge. Taking a perspective on the construction of knowledge that he refers to as nonfoundational social construction, knowledge is created in interpretive or discourse communities, comprised of individuals who share similar interests or goals and constitute themselves with a characteristic 'language.'

We have chosen to use the term conversation (rather than dialogue) in our work because this term more fully includes both the apprehensival and comprehensival dimensions of interactional meaning making. Like Rosenblatt, James, and others we embrace the multiple dimensions of conversation, where what is heard and perceived within a given interaction depends on the particularities of the participants involved and the context within which the conversation takes place.
From distinctions such as the sciences of nature and humanity, the aesthetic and the efferent, narrative and paradigmatic ways of knowing, cognitive and affective, dimensions of knowing have been separated and highlighted. But what has been separated by the conventions of science, people often experience as being connected. It is the search for the varied ways individuals make meaningful connections in and through their experience in conversation that underlies this study.

A Study of Conversational Learning Styles

The primary focus of this chapter is to highlight an exploration of the specific ways adults make meaning in conversation. This particular study used an interview approach to elicit the perceptions of participants regarding their evolving conversations within a graduate school classroom setting over the course of several months. A selected sample of 8 men and 8 women (total N=16), participated in 3 in-depth interviews over a period of 6 months in which they were asked to describe their own approaches to learning. We chose a naturalistic paradigm for our study, primarily to maximise information rather than to explicitly facilitate generalizability (Lincoln & Guba).
Therefore this study rested in a sustained conversational context, a semester-long doctoral seminar on learning and development. We made thematic interpretations of the interview data to describe approaches to meaning-making, and gave feedback of inquirer’s interpretation to participants for further conversation, clarification and refinement. Finally, using a dialectic approach, we inductively analysed data, which we compared and contrasted with the scholarly literature on learning, dialogue, and conversation to create patterns of meaning-making, grounded in the experience of these participants through their conversations within a learning environment.

We identified five distinctive streams or patterns of making meaning in and through conversation. These streams, grounded in the participants’ experience, provided a clear way to interpret the complex processes involved in learning through conversation. These five streams describe varied ways that participants connected, made meaning of their experiences and interpreted what they learned in and through conversation. The five streams are Resonating and Reflecting, Expressing and Interacting, Attending and
Appreciating, Interacting and conceptualising, and Listening and Analysing.

In the pages that follow, these five distinctive approaches to conversational learning are outlined, briefly defined and illustrated with excerpts from transcribed interviews.

Insert Table 1 here

Stream I -- Resonating and Reflecting

In this stream an individual could be seen as connected to another/others in the conversation by hearing them express their experience. Participants described how hearing another and resonating with their experience was the impetus for their personal reflection, insight and acting on this new meaning.

This connection led them to reflect on the meaning that such experiences had for themselves and/or for the other(s) in their daily lives. Their reflection led them to understand the experience in new ways, and to take action for themselves, based upon their new understanding. For example:

...I distinctly remember I was criticising the conversation...I kept saying [to myself] these people are...avoiding things that really
matter...they are only concerned with concepts and theories...[names colleague] mentioned about sharing experience...through the conversation a healing process would take place. And this brought me back to...an experience that I had gone through myself, which reflected the same process...And his conversation kind of triggered it all.

Resonating with others served as the impetus for reflection for these participants. In the following excerpt a participant explores the meaning of differences in her reflection.

How difficult it is to embrace things. Embrace and not fight...It is not that everybody has to agree with everyone. But how difficult it is to widen our range of acceptance... just embrace the difference...The way I embrace the differences, is listening to the different voices.

Giving expression to their reflection and insight ranged from a more private, one-to-one conversation, to giving expression in more public contexts. For example:
[This conversation] just convinced me more about the need for conversation...I am [now] taking more effort to converse with people, to be open and honest...about my person.

In Stream I, participants resonated with others. One way to characterise Stream I, from the perspective of the participants, is as one who is listening and resonating with others. One way to characterise Stream II is from the perspective of the participants, as one who feels listened to and feels others resonate with them.

Stream II -- Expressing and Interacting

In this stream individuals expressed their views on particular ideas, and used the interaction with their colleagues to clarify their own perspectives and feelings about the ideas discussed. Through their participation in the conversation they felt a stronger connection to and acceptance by their colleagues.

I felt very strongly that there were universal laws...whatever those universals are...I was very passionate about the subject...[it] is almost a basic way of life...When I put that out there...I was very much surprised...there seemed to be a lot of interest
and energy...around that issue. And I was surprised at that.

While initially communicating their feelings and perspectives brought them into the conversation, it was through their interaction with their colleagues that they further clarified their own understanding, of themselves and of others.

...I was very much affirmed...from the inside...and was somewhat reaffirmed by some people who shared.

One participant talked about a subject he was 'very passionate' about and described this conversation as assisting both he and his colleagues to clarify their perspectives on the topic. For him, 'the dialogue did help bring clarity to my own mind in terms of what I was saying.' The conversation was also significant to him because 'it was my feeling more comfortable with the group that was meaningful to me.'

I am having this constant struggle of communicating ...trying to have an appreciation for other people's points of view. And listening well and incorporate those in my value system or
my thoughts ... the conversation helped me in that regard... it seemed to me that that conversation helped me in terms of my perception of that group, it made it more cohesive for me... I felt a little bit more a part of the group, having initiated that discussion... I think they did get to know me a little bit better... It was my feeling more comfortable with the group that was meaningful to me.

**Stream III -- Attending and Appreciating**

Here individuals engaged in the conversation primarily by attending to specific others, by listening to and being aware of these individuals' feelings, perspectives and interactions. This attention led them to positively value this experience and deepened their appreciation for and understanding of others and of themselves.

...for me it meant there was a lot of energy around this subject... I thought we had fun from the... beginning... We talked about something real that has meaning to me... I think more than usual
we talked to each other, and listened better than we have.

Throughout her interview, in response to our various questions, one participant gave focused descriptions for each of a majority of the group members in ways that clearly reflected her awareness of each of them as individuals, in terms of their feelings and perspectives. For example,

...they both were much more vocal today than they had been...I think...they felt more aligned...

with the readings...than they had in a while...when [names colleague] first started talking about intuition. I immediately drew some understanding of the difference between [names colleague] and I in terms of our thinking by the way that he was talking about intuition.

In the discussion on intuition, this same participant described a number of insights gained through this conversation for herself and about her colleagues. She was able to clearly articulate the difference between her own experience as compared to her colleagues. Her clarity about naming her experience combined with her respect for the experience of another is what stands out.
In Stream III, participants experienced others in the conversations in ways that they were aware of both correspondences and contrasts. In Stream IV, students listened to and interacted with one another in ways in which their differences were central.

Stream IV -- Interacting and conceptualising

In this stream individuals with strong views on a topic interacted with others who held and expressed different perspectives. Through their interaction and through conceptualising these varied viewpoints, they gained insight into their own and others' perspectives and experience. One described how a clear focus to the conversation assisted him to hear different perspectives.

...But then...during the conversation, I saw that others were talking in a different way, looking at it from another perspective. All the readings that we had, and I thought for myself, there is another way. That my way is not the only way...these are different ways...they are as valid as my own perception.
In this stream, participants recalled that describing their perspectives to others was very important as was hearing others who held different perspectives.

...I also became aware of how complicated, or how complex a particular topic is...that it can be looked on from several angles...I was listening...to what other people were saying...asking myself...what...do [others] say and what is my stance, and can I identify with what they think or what they feel. Try to become more open.

Some participants described new awareness of their own perspectives on the conversation topic as being action oriented. Others described their insights regarding themselves and their own as well as others' perspectives.

Well, I became more aware of the fact that different people perceive situations differently...I also became more aware of my own personal tendency to feel defensive when I am talking about a viewpoint that affects me personally...the fact that different people have different reactions to the same situation ...It
made me aware of...a different point of view...I think it might have made me more accepting of
different viewpoints, of the topic that we were
discussing. But I do not think that it really
changed my basic viewpoint.

In Stream IV, participants considered varied
perspectives in interaction with one another. One way to
characterise Stream IV, from the perspective of the
participant, is as a listener and a speaker. In Stream V,
participants described conversations where they listened to
their colleagues, privately analysed the interaction and
came to new understandings through their participation. One
way to characterise Stream V, from the perspective of the
participant, is as a listener.

Stream V -- Listening and Analysing

Here individuals listened to others discuss their
perspectives and feelings on a particular topic. This led
them to distinguish between and to clarify the perspectives
they heard their colleagues discuss and to compare these
perspectives with their own. As they listened throughout
the conversation, they evaluated the overall conversational
flow and drew conclusions regarding their own and others' perspectives on the topic discussed.

As these participants listened to their colleagues engaged in various conversations, they heard and interpreted distinctive perspectives and were aware of what they were thinking and feeling about the overall flow of the conversation. For example:

...And it was being taken the wrong way...I would like to help clarify what he is saying, but he is saying it. And I am not understanding his thoughts well enough to jump in and clarify his thoughts for the class, so I did not...As it began to unfold, I was very uncomfortable, because I saw it coming as an open hostility...the way it developed...there was no hostility shown, just some very strong opinions. And they were very respectful of each other in offering those opinions.

Another participant described a majority of the participants in this discussion in ways that reflected her understanding of their varied perspectives and learning
preferences. She characterised her own stance in relationship to the topic of conversation as:

I was probably more receptive...trying to follow the conversation...it had to do with the fact that we were...talking about something that you could kind of hold on to.

In their interviews, the participants named their experiences in these respective conversations in ways that reflect new insights gained or clarifications about their own and other's perspectives.

...I like to discuss just from the different perspectives that people bring to the conversation...It did not change my point of view...The conversation with [him] did help me to understand his perspective.

Another viewed diverse perspectives as being related to different learning styles and life experiences.

I definitely can sense that we have different learning styles in the class...people are at different points in their lives... The way we see the world is tinged by that...by where we are and
who we are, and our experiences... I became more
aware of different people's opinions, values,
about where they are in terms of their points in
their lives.

Relating Meaning-Making in Conversation
to Individual Learning Style

Once we established streams of meaning-making in
the conversations we overlaid each participant's profile on
the Learning Style Inventory (Kolb, 1985) on the meaning-
making streams in order to determine if relationships
existed between individual learning preferences and patterns
of interpreting meaning in and through conversation. In
order to present this process, we begin with an overview of
the Learning Style Inventory (LSI).

The LSI is a self-descriptive instrument used to assess
an individual's preferred learning style. For each of 12
items in the questionnaire, respondents are asked to rank
order four descriptors, from most like you to least like
you, that describe the ways they learn. One descriptor in
each of the 12 items relates to one of four learning
orientations:
Concrete Experience -- an immediate, involved, feeling approach to learning;
Reflective Observation -- an approach based on observation and exploration of meaning in situations and ideas;
Abstract Conceptualisation -- an objective, analytic, conceptual approach to learning;
Active Experimentation -- an active, practical, pragmatic approach to learning.

This self-scored instrument provides two primary profiles. The first profile represents how much an individual relies on each of the four different learning processes. The second profile represents their preferred dominant learning style (Diverging, Assimilating, Converging or Accommodating).

The participants in this study completed the LSI as part of their preparation for a class session that focused on Individuality. LSI scores distributed almost equally across learning style preferences (N=16: Accommodating-4; Diverging-5; Assimilating-4; and Converging-3).

We then compared each participant's learning style preference with the stream of meaning-making they used in
conversational to determine if they relied on their preferred modes of grasping and transforming experience in the conversations they selected as the focus for their interviews.

Insert Table 2 here

Each of the participants with a preference for concrete experience connected in conversation through one of the three ways outlined in Streams I, II, and III. These ways of connecting are characterised by being attentive to one's own and others' feelings, experience and/or perspectives as communicated in the conversation. Each of the participants with a preference for abstract conceptualisation connected in the conversation through one of the two ways outlined in Streams IV and V. Both of these ways of connecting are characterised by hearing others talk about their perspectives on the topic of conversation. We overlaid each participant's preferred learning style on the streams meaning-making they used. This data is explained in the following section.

Learning Styles Emphasising Concrete Experience

In the Divergent learning style, participants with moderate to high concrete orientations were described as
interpreting their experience in conversation through Stream I (Resonating and Reflecting). A divergent learning style emphasises concrete experience and reflective observation.

Two of these participants explained that they were having a hard time relating to a conversation that was going on until they heard someone express their individual experience. For the listener, hearing and resonating with something that was meaningful to them brought them into the conversation for a moment. This connection led them to reflect on the meaning of what they resonated with, for them and/or for the other. In a sense, their participation in this conversation reflects a 'pure type' divergent learning style. They each acted on their new insights by expressing them to another or to the group and each described ways they took action for themselves as a result of their new understanding.

Reflective of a divergent learning style, these participants connected with the feelings and experience of another and reflected on meaning. The new understanding or insights they described also reflected a concrete feeling orientation. For example:
Figuring out how I could make myself feel better, adjust better, feel connected, feel community, feel at home...I was able to take action for myself. It has really changed how I feel about being here.

Another participant with a Divergent learning style in Stream I described how she identified with the 'anxiety level' and the way that people 'struggled with this issue' in the conversation. She further described how a 'fruitful discussion does not always have to be based on a cognitive aspect.' When asked in the interview if she had a sense of what this conversation might have meant for others, her insight reflected an awareness of the feelings of others.

An Accommodative learning style emphasises concrete experience with an action orientation. Here, participants with concrete orientations closer to the abstract dimension were described as interpreting their experience in conversation through Stream II (Expressing and Interacting). These participants described how through expressing their perspectives and feelings about the conversation, and feeling others resonate with and interact with them, they came to new understandings about themselves,
the topic of conversation and others. Perhaps reflective of the risk-taking that typifies an accommodative learning style, these participants described how the interactions about feelings and perspectives helped them to become involved in a new way. The insights or understanding they described also reflected both affective and interactive dimensions. For example:

_I felt a little bit more a part of the group, having initiated that discussion...I think they did get to know me a little bit better...My being able to share something with other people who were able to appreciated and resonate with what was meaningful to me...I was able to feel...a member of the group._

Crossing both Accommodative and Divergent learning styles, participants with high concrete experience orientations were described as interpreting their experience in conversation through Stream III (Attending and Appreciating). Participants with an Accommodative style described how they connected in the conversation by attending to specific others and appreciating their interaction. Reflective of an
Accommodative learning style, they described new insights gained in terms that indicated how they could act in the future or reflected a deeper understanding of how their feeling and thinking were connected. For example:

...I think I was thinking what I was feeling. And at times, I was feeling what I was thinking. If I think I am afraid, then I feel afraid...And I took the book to begin reading, thinking I should be nervous, so I was nervous. As I read the book, though, I think my thought process took a back seat and my feeling process ...there was a conversion that took place. And, as I allowed myself to think out of my emotions. Then I have a different experience. And I think that is the type of transformation that took place.

Learning Styles Emphasising Abstract Conceptualisation

An Assimilative learning style emphasises abstract conceptualisation and reflection. In the Assimilative learning style, participants were described as interpreting their experience through Stream Four (Interacting and Conceptualising). Each of the participants described how
they connected in the conversation by hearing their colleagues express perspectives on the discussion topic that was different from their own. The differences between what they were hearing and what they thought and felt seemed to be an impetus for them to engage in the conversation by stating their individual perspectives.

Reflective of an Assimilitative learning style, each of these students described their learning in conceptual terms. For example:

> Because as I said, we have had this discussion over and over again. And I am waiting to hear...this is what we should, or can [do]...what I think we need is a national think day. And it will be a day where we think before we do anything. And more or less, saying that thinking will give you control.

Another participant with an Assimilative learning style and the participants with Convergent learning styles were described as interpreting their experience in conversation through Stream Five (Listening and Analysing). A Convergent learning
style emphasises abstract conceptualisation with an active orientation.

The participant with the Assimilative learning style connected in the conversation by listening to his colleague's perspectives on the topic of conversation. He identified distinctions between his own perspectives and those he heard expressed.

Each of the participants with Convergent styles connected in the conversation by listening to their colleagues' perspectives and feelings on the topic of conversation and through reflection, made distinctions between their own perspectives and those they heard their group members express.

Demonstrating the often times controlled expression of emotion that characterises this learning style, two participants described how they considered making a verbal contribution to the conversation and for varied reasons did not. For example:

Because I was starting to get angry with what I was seeing as sort of the manufactured stupidity of some of those remarks...I was remembering that one of the
pieces that we read...there were some statistics on [the topic being discussed]...I was about to get on my soap box, and sort of trumpet them...fortunately, [names colleague] just spoke up very quietly and [quoted statistics on the topic]...I am really glad she did that. Because it was a much nicer way of doing that, instead of me getting up...and kind of beating people over the head with facts.

Another participant with a Convergent learning style described how at varied points in the conversation she was thinking about other matters that directly involved her, rather than attending to the conversation.

**Implications for Application**

We believe most teachers, trainers, group facilitators and others who work with adults in formal or informal learning settings know from experience, that individuals take in, interpret and act on experience and ideas in different ways. Over a hundred studies exploring learning styles in diverse professional and academic areas support the
viability of learning styles, as described through the Learning Style Inventory (Kolb and Smith, 1986). As suggested through this research, learning styles are a contributing factor to an individual's way of making-meaning in conversation. As such, they are one way to think about pluralism in the learning environment.

We posit, with several other theorists, that knowledge is socially constructed. Therefore we see conversation as a central way of interpreting experience and creating knowledge. Furthermore we note that learning styles influence the ways individuals participate in and make sense of their experience in conversation. Therefore diverse approaches to participating in meaning-making in conversation need to be systematically considered.

The participants' experience in this study reflected that verbal interaction in conversation is not the only dependable source of information to gauge if people are involved in learning in ways that are meaningful to them. Listening can be active when it is a form of focused attention to others in the
'here and now,' or a springboard to personal reflection. Listening can also be a 'safe' alternative when speaking is perceived as being disruptive to the conversational focus.

Conversations that highlight ideas and concepts can provide an entry point for learners with an abstract orientation. Conversations in which participants share their experience and feelings provide an entry point for learners with a concrete orientation. A key implication of this finding is that it is important to create multiple entry points into conversation for participants with varied learning preferences. Individuals may be silent because they are not connecting to what is being talked about.

Drawing upon de Bono's concept of the mind's memory surface, one way to conceptualise learning is to develop new patterns and ways of approaching the learning experience. By developing new patterns of apprehending and transforming experience, learners can increase their repertoire of knowledge acquisition. Thus for more concrete oriented
learners, this could include developing more abstract and cognitive patterns. A learner who is used to hands-on activities might seek out ways to enhance their understanding of specific discipline concepts and the ability to more systematically analyse a situation or problem. For more abstract oriented learners, this could include developing ways to perceive through their senses and attend to their feelings in diverse situations. One critical area where expanding the learning style repertoire can happen is in conversation. As learners focus on the meaning of learning differences within a group, they find access to other ways of approaching the learning task as peers model other perspectives within the group interaction. This conversation offers learners the challenges and opportunities they need to stretch their learning style and embrace in a more holistic way the cycle of learning.

Parker Palmer (1990) defines the academy as 'a place of true pluralism where many stories can be told and heard in concert' (13), where students not only come to know the ways in which the world works
but also come to know their inner selves. Traditionally, education has been equated with mastery of content and reflected a more abstract, cognitive and outside-in orientation to learning. If one accepts our experiential perspective of a dual knowledge theory of learning, then learning styles become a central educational consideration for creating learning environments.

As designers of learning contexts, educators can reconceptualise learning as a process of assisting learners to more fully enter into the ongoing conversation that is a discipline in ways that respect the strengths of distinctive approaches to meaning-making and learning. Ways of knowing by appreciation as well as knowing through criticism can be experienced in the classroom. Conversation can be a way for participants to connect with each other as well as each other's ideas and can serve as the stimulus for solitary or more communal reflection. Reading material can be used in ways that evoke an aesthetic stance and can be integrated with reading that evokes a more efferent stance. Good
conversation in learning environments can assist learners to listen to their own inner voice and to each other.
Table 1: Streams of Conversational Meaning-Making

<table>
<thead>
<tr>
<th>Stream I</th>
<th>Stream II</th>
<th>Stream III</th>
<th>Stream IV</th>
<th>Stream V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resonating &amp;</td>
<td>Expressing &amp;</td>
<td>Attending &amp;</td>
<td>Interacting &amp;</td>
<td>Listening &amp;</td>
</tr>
<tr>
<td>Reflecting</td>
<td>Interacting</td>
<td>Appreciating</td>
<td>Conceptualising</td>
<td>Analysing</td>
</tr>
<tr>
<td>Gaining understanding of the meaning of one's own experience and/or others' experience through resonating and reflecting in and through conversation.</td>
<td>Gaining understanding about one's own perspectives and feelings through expressing them, and feeling and hearing others resonate and respond during the course of conversation.</td>
<td>Gaining understanding of specific others and self through attending to and appreciating the interaction in the 'here and now' of the conversation.</td>
<td>Gaining understanding of one's own and others' perspectives and feelings through interacting in conversation with others who hold and expressing different perspectives.</td>
<td>Gaining understanding of other's perspectives and feelings about the topic of conversation through listening and interpreting others' interaction in the conversation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hearing Others</th>
<th>Heard by Others</th>
<th>Aware of Others</th>
<th>Differed with Others</th>
<th>Compared with Others</th>
</tr>
</thead>
</table>

Table 2: The Relationship Between Learning Styles and Streams of Each Participant
This table shows the correlation between learning styles to streams of meaning-making among the participants in the conversational learning study. This study found initial patterns of meaning-making related to each learning style.
Works Cited


