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‘This Motley Crew’: managing ‘creatives’ and the creative unit

The language of interaction
- creative tension in heterogeneous groups

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Biography:

Bengt Olsson has the background of an engineer and a degree in psychology. He is now working as a lecturer and a doctoral student in Innovation and Design. He has developed and established the Arts Management programme at Mälardalen University. He has a Master of Fine Arts in piano and has been teaching piano and also worked as a musician on a freelance basis for several years.

In his research project Bengt Olsson is trying to come to grips with creative activity in an intense group effort, such as when musicians improvise or when a group of industrial designers brainstorm to solve a client's problem. One might say that what he is studying is the handover of the creative spark from one person to the next, inspiration at best accelerating.

Keywords: creativity, interaction, dialogue, diversity

Abstract:

A basic condition for creative solutions and successful innovations is bringing together individuals that represent a diversity of experiences and notions regarding the particular problem situation. In the theory of creativity the notion of variety is a fundamental one so that when different viewpoints interact, the outcome has the potential of being innovative. In the initial phase in the processes of innovation there are various brainstorming techniques for collective creativity (Stein, 1974).

One of the creative collective's fundamental challenges is to maintain the vitality in cross-disciplinary meetings without getting caught up in endless negotiations never reaching any constructive solution or outcome. This paper points to the paradox between the aspects of 'motley crew' interaction and divergent thinking in the domain of creativity on the one hand and the striving for consensus in the process of decision-making on the other. The notion of consensus is often taken for granted, implying that collective activity must originate from mutual agreement. This paper presents two specific group activities that were supposed to be creative on a collective level: a brainstorming group at an industrial design firm in Stockholm and a group of temporarily assembled improvising professional musicians. A question that this report is dealing with is: How might we manage this motley crew of 'creatives' who represent variety in several dimensions, in order to make them interact constructively?

Differences might often cause misunderstandings and a confusion of languages; the tension that is built-in in a diverse multitude might be both constructive and destructive. The tension in the intersection between different domains of knowledge might be managed constructively so as to eliciting energy, momentum and driving force in the mutual effort to reach productive and durable solutions. It is all about elaborating interactions where differences spur and fertilize new ideas. But this creatively managed interaction might also lead to a stalemate and even to conflicts where differences and clashes of opinions become reenforced and ingrained. Such a development is most likely destructive resulting in abrupt single-minded solutions.

One possible key for facilitating and managing such a creative collective is the awareness and conscious utilization of the ambiguity of language. Tension or inertia might originate in the tendency of each member to take her or his own domain-specific concepts for granted. Such a naïve unproblematic view of language might constitute a trap but also provide an opportunity.

Since our perception is a process of continuously interpreting and making sense hermeneutics maintain that we are intentional beings. Practising analogous thinking might provide a constructive way to the handling of variety and the productive maintenance of creative tension. Each profession has developed its own specific language so that, for example, a designer has refined an ability to spontaneously make rough sketches and a musician uses her instruments to clarify a particular meaning or message. In this study the improvisational musicians had no sheet music, a condition that forced them to formulate their aesthetic intentions with sound, playing and singing.

One aspect of verbal language limitations is articulated in the concept of “verbal overshadowing” introduced by Schooler (1997). When subjects in a study were requested to describe a face, a smell or a taste, their words seemed to overshadow their experience. If words prevent thinking or recollection then we might have to be cautious with verbal descriptions. This also points to the importance of the choice of languages for mediating ideas. What kind of language, or depiction, facilitates constructive creative collectives?

Introduction

The paradox of multitude

The day-to-day working life exerts an increasing demand on an organization’s members’ readiness for multitude and diversity. Florida (2002) and others argue that the potential for creative outcomes is largest when there is intense interaction amongst diversity. It is all about establishing conditions that permit intersections between different domains to emerge. The theories on creative work groups stress the importance of variety (Belbin, 1993, Katzenbach, 1993). Early studies show some evidence that when variety in experience and domains interplay the outcome will be of higher quality than if the group is composed of members with more homogeneous backgrounds.

Georgsdottir et al. (2003) discuss difficulties in maintaining a creative climate in a group when every member applies a different perspective on the problem that the group is assigned to solve. The organization expects that the members should display a flexible attitude and be able to contribute constructively in establishing an interacting entity. Getz and Robinson (2003) argue that all collaborators are potentially creative and that it is up to the organization to take initiative providing the appropriate conditions for creativity to flourish.

The quantity of management literature on this subject might in it self be an expression to the contrary, that is to say, in work life there are rarely any efforts to counteract uniformity and narrow-minded thinking. Ford & Gioia (1995) maintain that if the organization does not pay attention to this tendency the collaborators will by force of habit reinforce notions that give priority to secure and traditional behaviour.

Collective creativity

The nature of creativity does not correspond with one best solution – despite the fact that this is exactly what an overabundance of management literature suggests. To put a number of individuals together is certainly possible and there are overwhelming quantity of theories and models to confirm this knowledge (Stein, 1974; Katzenbach et al 1993; Belbin, 1993). They seem to claim that the efficient team finds creative solutions on problems because of their diversified character.

Hargadon et al. (2006) have studied problem solving at work. They stressed the importance in thinking together as a basic condition for collective creativity and points out that group members’ interactions are critical. Just as the thinking i.e. cognitive activity, is inseparable from the body, the interaction is the breeding ground for collective creativity.

In order for this collective creativity to emerge collaborators have to view their colleagues’ actions as meaningful and interpret it in correspondence with the specific situation. In order to bring about this meaningfulness individuals have to pay strenuous attention to particular interactions with others in the group. To describe this conscious influenced awareness Langer (1989) use the concept “mindfulness”.

It is about the importance of being engaged in each other and the activity we are involved in, to really exist in the very moment (Langer, 2003).

The collective creativity is characterized by the instantaneous and could be described as a fleeting coincidence of behaviours (Hargadon et al., 2006). The activity of interaction seems to be the language of creative collectives. In the process of interaction continuous negotiation is carried out. This might imply that the genuinely creative collective is capable to lead itself because of its mindful character.

One of the purposes of this research project is to develop a more mindful awareness of such language. In that sense, we might ask questions concerning that language. How might a creative language be articulated?

Action and epistemology

Thus, this research project focuses on inter-relational actions. We mediate meaning to each other through series of actions (Holme & Solvang, 1996, pp. 328). The notion that the human beings' acts are intentional has prompted von Wright (Johannessen, 1997, pp. 172) to construct a model to explain that the intention behind an act can only be explained in reference to the very situation in which it is performed.

A notion that does not connect human acts as linear with consciousness and intentions as von Wrights' intentional model, has the concept of practice as basic foundation. This notion implies an argument that thoughts are shaped by patterns of actions. Human actions influence and even govern human thinking. Bodily activity is interrelated with cognitive activity. According to this view, one might argue that a human being thinks the way she acts.

When individuals repeatedly interact to solve a problem a practice is developed. The way to response as well as the way to call for attention, are shaped by the individual's 'conversantness' with the phenomenon that the practice is composed of. It is also constituted by the skill acquired to apply, for example, a specific concept in the practice. It is a continuous double-directed (pointed) flow from action to practice to concept and a flow from the thinking of concepts to their verification in action which in turn gets its meaning from the specific practice. Thus, there is a mutual constitutive relation between the building of concept, human patterns of behaviour and human ways to understand the reality. When an individual is considered to be a qualified practitioner of such an established pattern of behaviour expressed by a concept then one might say that she has established comprehension of that concept, she has acquired the concept. This pragmatic-constitutive view of the nature of knowledge suggests that the course of action depicts our understanding of those concepts expressed through the practice (Johannessen, 1997).

The Ensemble Quality

Austin (2003) has carried out an ambitious study with entrepreneurs from different fields such as software programmers, musicians, glassblowers and industrial designers. The aim of his research was to find what qualities that the paradigm of diversity should strive to maintain. The force of these qualities stands out best in comparison with the industrial paradigm, the assembly line and sequential working processes. He suggests that an artful approach has to be established which is performed through a process characterized by four necessary qualities: Release, Collaboration, Ensemble and Play.

Release – this quality seems to be the opposite of control but it is rather a type of control. This control demands genuine preparation that facilitates control – the desired action is reached in an unpredictable way because it follows the 'gravity' of the ensemble.

Collaboration – suggests that conversations evolve through individual freedom; it is a conversation where everyone may contribute ideas. The basic condition for this interaction to occur is the process of reconsideration, which is a concept that substitutes the industrial designers' replication and the politicians' compromise. Those who collaborate reconsider a problem in the light of each and everyone contribution so that new and unpredictable ideas may emerge. This artful collaboration establishes something that is greater than a group of individuals – an ensemble.

Ensemble – this concept refers to both a name and a quality. A group collaborating in an artful way articulates the notion of ensemble quality. This tautology characterizes artwork that might be one of the causes why knowledge originating out of traditional industrial domains have difficulties grasping

what mechanisms artful collaboration activates. An ensemble is something qualitatively different from a conventional team.

Play – refers to collaboration and interaction and is the product of an ensemble. In the theatre the play exists only when it is performed. The interaction constitutes the play just as the music exists only when performed. The music or the stage play emerge in the activity itself and this condition is the reason why the activities scarcely may be separated from each other – if you remove one, the other ceases to exist.

Austin's perspective of the process makes it clear that the artful way of working turns away from established planning and precise descriptions of goals, instead turning towards genuine preparation and improvisational interaction. The product is developed in artful activity of collaboration. The product is a result – not a goal.

At the local jazz club in the town of Eskilstuna, the world-famous drummer Adam Nussbaum gave a workshop. He was talking about his function as a drummer and leader of his group with Staffan William-Olsson from Norway on the guitar, Anders Persson from Sweden on the grand piano and Lennart Ginman from Denmark on the bass. When commenting on what it really means to interplay he tells the following story:

“There was a guy sitting at his drums playing. I walked towards him pointing at his foot on the bass drum pedal. “What is that one doing?” I asked. The guy stops playing and exclaimed with surprise: “It keeps the pulse!” I answered “Does THAT keep the pulse?! I thought you did!” Adam clarified his example: “I am not keeping the pulse for my co-player, we all do that together. My function is to accentuate what the other guys are saying and to give different colours to their expressions.”

With this example, Adam describes his notion of interplay and communication. He assumes that each member has the skill to relate to a common, implicit pulse. Their music is not like pop or rock where the drummer plays all the beats. Every group member relates his own playing simultaneously to that pulse and to the other co-players' playing. In that sense, it is a combination of the individuals competence on the specific instrument and the individual's trained skill to relate that makes the interplay flow.

Referring to the same example Adam also explains how this attitude of mindfulness influences timing and the character of music – the result of the interaction. By relating to each other in this combination of mindful and effortless way the musicians establish a space between each other that is not just air, it is a space of significance.

Study 1: Jazz Improvisation

One of the studies carried out is a part of a project called IMPROLAB at the Royal College of Music at Stockholm University. The purpose of this laboratory was to establish a stage where collaborators working in different apartments could get the opportunity to meet and play music together. From the researchers point of view this project was a pilot study that would function as an empirical base for funding applications for further research. The researchers participating were Pierre Guillet de Monthoux, University of Stockholm, Ann-Sofie Köping, Södertörn University College, Marcus Lindahl, Royal Institute of Technology and Bengt Olsson, Mälardalen University.

The Rehearsal

A group of improvisational musicians was assembled to rehearse for a concert at the Royal Music Academy in Stockholm. They met for rehearsal for the first time the day before the concert, starting at 7:00 am and finishing at about 10:30 am. For this research project the rehearsal and the concert were captured on digital video for transcription and analysis. During those hours they managed to rehearse ten tunes that were sketched roughly with chord sequences and a melody on sheet music. This was the raw material that they continuously negotiated around during the rehearsals.

They were informed about such specifics as where and when the concert were to be held and what kind of audience the organizer is addressing. They learnt of the concert title and what kind of advertising has been made.

Probably, they were well aware of the time limit. The concert is to be held the next day and they only have a couple of hour to rehearse. All of them had their own projects going on and when this rehearsal ends each of them rushed off to a concert or a recording studio. It became obvious how busy they all were when they tried to agree on a meeting time before the concert next day. Actually, during the whole rehearsal the aspect of time was present and had to be taken into consideration.

The evolving dialogue was at times very intense. This made the transcription of the dialogue a real challenge. All six musicians had specific opinions that they willing to share with the others. Some of them carried their opinions through relatively purposefully whereas others expressed their ideas without studying how the others received it.

The Survey on Improvisation

The audience at these concerts was requested to complete a questionnaire concerning improvisation in general. There were 83 respondents giving detailed answers. Some of the results are summarized in the following paragraph:

- Improvisation is not an exclusive talent; it may be taught and acquired through training. It is universal in the sense that everyone is doing it to some extent – *“Everybody can do it! It does not belong to certain domains, it is required most of the time”*.
- It is most evident in ordinary repetitive situations. It is something you do when you master it thoroughly – *“It is not easier to follow some template”*.
- Improvisations are performed effortlessly and spontaneously while at the same time there is structure and things to pay attention to – *“in our case it’s about thinking as little as possible and rather just let it happen”*.
- Improvisation is basically interaction, it is not an activity one single individual could perform all alone – *“It’s about giving the others space and time to pay attention and listen...”*

On planning and instructing

Q: “when you came to the Royal College of Music to rehearse... several of you presented their suggestions of tunes for the concert the next day... some were written down on paper... and you had some sketches... that was really rough... so, let’s say that your picture of the goal is that “you are going to give a concert for an audience that has bought tickets tomorrow” ... so then, how do you go about this? Would you first start to describe this concert ... so that, the more able you are to describe the picture of the goal verbally into words ... whatever it could be... do you think that you would have carried out the rehearsal and through that made it a better concert?”

I: “No, I don’t think anyone of us would have appreciated if it had been so clear and well defined... it would rather have been perceived as an insult ... you see, everyone was really... how should I put it... a skilled performer, capable, conversant and trained musicians... they are all experienced musicians and used to provide creativity at rehearsals and in concerts. Experimenting is a habit... when doing it they are not in need of so much... words... and there are also an enchantment to this excitement, this insecurity ... it stimulates us to make it work...”

They are not helped by clear verbal descriptions, on the contrary, they would rather regard that as insulting. For these musicians the characteristics of improvisation and their approach to music might be contagious to their behaviour in other areas as well.

The mindful improvisation

The improviser exists here and now and is expected to respond intelligently on impulses from co-players. One might say that improvisation is the ontology of “the now”. Weick (1993) suggests that the improviser creates meaning retrospectively, meaning that the improviser continuously is looking backwards for meaningful patterns in what has been played. Whereas Knudsen (1998) argues that one has to make a clear distinction between retrospection and irreversibility.

Improvisation is characterised by ”no-turning-back”, there is no possibility to replay anything. This implies that the improviser is continuously interpreting and simultaneously responding to what is happening, by creating. The process might be described as being in the now with empathy whilst

continuously making sense of and with ones own actions. As results emerge, it is too late to change anything, there is no other option than to throw oneself into the act. One needs to have something to mull over in order to start thinking, action comes first, eliciting the process of thought.

To Knudsen the collective is central. He stresses the fact that the soloist is first of all a co-player. He points out that the playing is genuine creativity in its own, implying that the ensemble as a unit must be engaged in the kind of feeling the interaction evolves. The performance is not so much a question of memory as it is about consciously being aware of "the now" – then execution comes automatically. There is no time to analyze vague ideas in search for rational decisions but nevertheless the improviser is filled with understanding of what is going on and where the interaction is heading.

Study 2: Brainstorming

Brainstorming – principles and instructions¹

Brainstorming is considered to have been created by Osborn in 1940. The purpose was to make advertisement idea generation in particular and business meetings in general more efficient. The theory of brainstorming emphasizes cognitive processes and the ability to associate as crucial for the creative process. The method is based on two premises or principles and four rules. The first principle could be formulated "Defer judgement and delay decision-making" meaning that we should avoid anything that puts breaks on the creative mind. Research has found that instructions with minimal evaluation criteria descriptions results in a higher number of suggestions while instructions that involve much-appreciated values descriptions obtain responses with higher quality. When respondents are requested to be more appreciative their responses got higher quality.

The second principle could be formulated "Quantity breeds quality", implying that the most dominant thoughts are those which are most common or usual and therefore probably the safest and most acceptable. Ideas that are more odd and potentially creative are likely to arise later in the chain of suggestions and can only be reached by producing a higher number of ideas.

- The first rule is "criticism is ruled out". All criticism and evaluation are put off until later. In order to remind the participants of this rule a session leader might ring a bell as soon as someone starts criticizing.
- The second rule is "freewheeling is welcome". The wilder the idea the better for it is easier to tame down an idea than to hot it up.
- The third rule is "quantity is wanted". This rule is a restatement of the second principle.
- The fourth rule is "combination and improvement are sought". One participant's idea might be the stepping-stone for some other's idea. This rule might also work to offset any feeling of embarrassment one might experience from not having been the first to think up an idea.

Brainstorming at an industrial design firm

In the study of variety and descriptive language we have studied brainstorming sessions at an industrial design firm in Stockholm. These sessions last for about three hours and are usually carried out by five to six individuals, the session held in a small traditionally furnished conference room. The participants are a mix of employees of the firm and hired experts or consultants, all depending on the subject field. The whole brainstorming session was captured on digital video for transcription and analysis.

It is a warm, intense atmosphere in the room. The dialogue alternates between relaxed, laid back small-talk about peripheral subjects and even complete silence to an intense and eager dialogue. In those periods in the dialogue several participants flesh out their own ideas and when doing so the tension is gradually increasing. There are several mutually competing solutions living side by side.

Each individual that has contributed with a solution to the problem tend to continue to argue the advantages of hers or his idea by underlining its favourable characteristics while at the same time reminding about the weaknesses and deficiencies of the others ideas.

¹ The text in this paragraph is referring to Stein, 1974.

Y: I would like to do something about the “bytta” as well... so that one could hold the bytta without kind of ... (she gesture with her fingers in the air how difficult it is to get a grip.)

T: I think that it is ... hard to get at ... kind of...

Y: it is too big... (with elbow on the table) ... you see, the size are, of cause... the profit in... the amount of ice-cream, it is kind of... family-pack... but... it is too big to allow gripping...

T: it looks like a little... recess in the bottom so you could actually grasp it...

They use to bring in several physical varieties of the products they are to improve. These objects facilitate their thinking process by making it more concrete. When figuring out what they perceive and associate, these permit them to involve a larger part of the body in the dialogue. Another very interesting aspect of this use of physical objects in the dialogue is that it seems to function as a baton in a relay race. The participant that for the moment is holding the object automatically gets attention from the others. One might suggest that the object helps distributing the participants' contributions and thereby lead and structure the brainstorming session.

T: aaa... is it... this corner thing... right?

B: not convinced yet...?

T: I don't know... (He puts the ice-cream box on the table) ... is it just because it is easier to break the sealing from the corner ...

J: yeah... since it's ice cream in it, they put it aaa... simply on the corner... ... usually they put it... on the aaa... the ellipsoidal one, like this one... it's in the middle...

T: yeah

J: ... and... aam... they're always, also trying to put it like... more aaa... down to here...

T: to the side...

J: to the side so that they have some sort of corner... to ripple out... so, as you said... then you finally have one corner... aaa... then comes the next one...

T: so then we should do a smart corner...

J: a smart corner? Yeah...

The dialogue is filled with descriptions of vague ideas by using a very broad language such as animated gestures using fingers, hands, arms and facial expressions. The participants are also frequently using sound effects to emphasize their point of view. And as designers they of course have developed skills to make rough sketches spontaneously.

K: ... or you can... or at the lid you can have a... down effect... and... “thict” (sound effects)

B: yeah... just a long...

J: hihi... but how about aaa... were finding a... to reach a really low angle, and aam because they always have aaa this can over here, right?

T: yeah

J: and, and it would be like... I were just thinking like aaa... bottle of aaa champagne, or something like that... when you have aaa the plastic to peel around... and then you have a long stripe and then you can lift... aaa as a top over... that is easier... I can imagine aaa you can have a little... something... which you peel... and then you peel plastic and then it's getting a little bit bigger... and then you have... a long... grip...

Y: but it's still...

J: and it still fits on it...

Y: ... it's still looking like... little side grip... like tweezers I mean, ... then I think...

J: no, but aaa... cause like... aaa...

Y: ... like that “GB-bytta” ... Emil, would you pass me the... ice cream box... ... then I think it's better to have as... aaa... grasped... hihi, I'd go for the wrong concept... hehe... ... it's like aaa... on the... trunk of your car...

T: yeah

Y: ... you have this hole in the... (hitting on the ice-cream box' side.) ... in the trunk, so you can put all your fingers in there...

J: mmh

Y: ... and then... (she opens up the lid) ... because it's... suddenly... a different force...

T: jahh

Y: ... if... if I can hold this like that... and just... (opens up the lid again) ... then I'm using like... the strenght of my arm instead of my fingers...

J: mmh...

Y: so if you can make, like... the box... to go... "twächpt"... (sound effects)

J: mmh

For the creative process in the brainstorming session one could question how large a number of ideas and deviant opinions the dialogue might succeed to manage constructively. The creative process is supposed to be stimulated by maintaining diversity as long as possible whereas in the innovative process one should focus on one idea and strive for its development.

K: I have another kind of idea also that... while we already... eeh...

T: so... you got... you'd better to cut it off... before, you'd got an export... here... adding grip to...

K: here... so... partly... a cut so that... when you press on this... then the tension is released on the whole lid... then it will be easier to... to take away...

Y: something like that eeh... lunchbox there... with...

T: somehow... I cannot recall to me, this is, this is probably... the stuff is like a great living hinge material... aaa...

K: a corner, and then you see a notch, thus... the corner flap here... cut... (he gets up from the chair and walks to the big sketch-book)

T: cut like this...

K: yeah... no...

Y: no

K: cut like ... this...

T: yeah, okay...

K: ... so it is a bit into the lid but when it is closed it is tight when you release ... then you only have the pressure on that one then all the other edges come loose ... the pressure is released on every edges... it will be easy to lift... then when you put it back again... this one will stand up, like this... when you lift it again you will only have to... put the lid on, and press this down... "tchutsht" (sound effects)... then it is closed... it is... just a tiny pressure here... the whole... an arm of a lever, it is the effect of the lever... (He walks back to his chair.)

T: okay

K: do you understand...? And it... it will make it possible... that one doesn't need... one get the tension out of the lid, so to speak...

Y: but then it's probably not as good, to reuse...

During interaction activities continuous negotiation is going on. It is not an unfriendly or hostile discussion but rather an eager ambition to get one's own idea across to everyone else. In this process of reconsideration of old ideas or concepts the members' different experiences are woven together building new ideas. These interactions are continuously resulting in ideas tying in well with Austin's ensemble concept (Austin, 2003).

The concept of language is here used in a broad meaning that includes all kinds of modes or lines of actions that human beings rely upon to express themselves and to communicate with others. This would include writing and sketching ideas or using models, prototypes or mock-ups as well as acting or the use of artistic expressions.

To generate and express ideas in heterogeneous groups

The dialogue in music rehearsal was made up of both verbal and bodily expressions such as facial expressions and gestures. There is of course also a musical language that consists of tones and chords by singing or playing an instrument. Thus, it is not only about verbal language. When the singer introduces a new song she continuously shifts back and forth between verbal expressions to singing or sounding back to verbally descriptions again.

The Singer: so... I also took this "Stormy Weather" that one could do... if that's okay for you... the two first A-parts... one or the two, very slowly in tempo or just... rubato. And then one gives a tempo... (she hums a couple of tones in the melody)
 ... let's see what have we got... give me a C... (she then continues on to the A-part very fast and slows down to sing in normal tempo): "... all the time..." we will arrive at... and then one gets going then...
 Hum m mm mm... (she snaps with her fingers without counting as to simulate the counting and then she hums a phrase of improvised solo) ... if I then try to give a tempo, kind of...
 The drummer: in the B-part...?
 The Singer: the B-part, the one just come to... so I count... one-two-three-four... (she continues her scat-singing directly as to show the piece characteristics)
 The Bass player: okay, do you have any sheet music on that or...
 (the singer continues scat-singing while she walks around distributing the paper)
 The Singer: now, let us see... this is it... it is some nonsense written here but that is not anything to be concerned with...

This example shows how different dimensions in our communications could be woven together very naturally. If the singer were to depend on verbal expressions exclusively when doing this kind of descriptions she would probably get exhausted in extensive rewritings using metaphors and analogies. And as a consequence everyone in the group might lose attention and energy. And yet, she might not have mediated anything of what she wanted to express in the first place.

By introducing the concept of "verbal overshadowing" Schooler (1997) is stressing a problem with demands for verbal reporting. Some dimensions of the subjects' perception is lost when they are requested to describe what they have seen, i.e. faces, smell and taste. The verbal language is our number one tool when mediating ideas but there are several other ways to communicate meaning. And some of them are even more precise than verbal language.

On communication and the confusion of language

The other dimension of multitude and the mixture of individuals coming out of different professions to obtain creative results is the confusion of language. How should the facilitator go about establishing the basic conditions for genuine understanding and dialogue?

Usually our day-to-day use of language is not seen as something problematic. The meaning of a word is continuously stretched and hardly anyone worries about that whether what is said is perceived and interpreted in several different ways (Hammarén, 1999, pp. 160).

This naive or unproblematic view on our use of verbal language might in some situations cause difficulties because each knowledge domain creates its own vocabulary and basic assumptions. This view has Fleck formulated by the use of the concept 'thought-collective' and 'thought-style' (Fleck, 1935). It could be things or conditions that are taken for granted but on request they might be described verbally. A deeper dimension harder to manage is the reality denoted by the concept of tacit knowledge. Wittgenstein (1953), Gallie (1956), Taylor (1971) and Polanyi (1983) have made somewhat different distinctions of the concept. In this research project the concept of tacit knowledge is used to describe those phenomena that do not allow themselves to verbal descriptions. It refers to the kind of knowledge and skills that is acquired during repeated activity related to a specific practice (Johannessen, 1997). There must to be some kind of translation going on when individuals from different knowledge domains interact.

Q: do you feel that... there is more limitations when you have to adapt to the other co-players... if I may give an example... if one should put Zlatan and Henke (famous football players) together or in the same way if one put Foppa or Sudden (famous ice hockey players) together ... (it is no problems), but if one were to put Foppa and Zlatan together then you would have kind of... it's not obvious what one should do then...

The Singer: I think that is interesting... because I think... it could be that... if you compare with language ... then this might turn out to be kind of... you have to be more clear or distinct... it becomes more rough... kind of coarse... than if you were coming from exactly the same genre and had played a lot of free improvisation together... it's about playing quite a lot together, always doing a

lot of free music together... then you have, then one could say that the language becomes more subtle... that one could express oneself with more subtlety...

We are from different genres and we communicate together... and it's okay, it works... we create good music but one might have to be more clear, more legible, now than what one should have to be otherwise...

The majority of respondents reported a positive experience in listening to the improvised music. They agreed that this communication between genres contributed positively in making the music fresh and vital. Some respondents were more reserved in their opinions and one respondent reported that he felt an obvious confusion of languages that contributed negatively to his experience.

Managing diversity

The notion that diversified thinking is facilitated by differences among the participants seems widespread. Thus it implies that the probability for novel results increases positively correlated with larger differences between participants. Therefore, when composing a creative team the facilitator is expected to choose individuals with differing experiences from different vistas of working life. If this notion of the importance of differences to creative achievements is valid, then the methods applied must take this into serious consideration. A method that has been used at corporations such as SAAB Combitech and Statoil is called the Dialogue Seminar. At SAAB Combitech this method was used to produce specifications for new projects in order to make engineers and the project leader to understand their customers and assignments better.

A method for dialogue within a multitude emanating out of variety of disparate domains

Göranzon, one of the initiators of a collaborative undertaking between the Royal Institute of Technology and the Royal Dramatic Theatre in Stockholm has developed a forum that is called "the Dialogue Seminar" (Ratkic, 2004), active since 1985. The Dialogue Seminar method is a sequence of reflective colloquiums using a qualitative and philosophical approach to the phenomenon of leadership. The purpose is to establish a dialogue between artistic expressions, the philosophy of science and work related skills.

A fundamental idea in this method is that it should house multiple paradigms and their descriptive languages, so that strains and paradoxes give energy to coming up with creative ideas. Instead of one individual thinking in a divergent manner, the whole dialogue is built up of divergent paradigms through the participants' diversity in skills and expertise. The method of the dialogue seminar might be described in a concisely as follows:

- The dialogue seminar is compounded of a sequence of five to six reflective colloquiums.
- Six to twelve informants are assigned a qualified text to read "with a pen" and write down their own reflections on the basis of a given theme. This 'text' has the function of 'putting the thoughts into motion' and is usually taken from the fiction or philosophy works. Visiting a theatrical performance or a concert may also serve as the points of departure for the participants' reflections.
- Then they all meet at the seminar and read the reflections out loud, one after another and get feedback from every participant. The following dialogue is permitted to take considerable much time, as a rule some six to eight hours.
- One of the two leaders serves as a secretary and captures themes that are evolving during the dialogue. The secretary compiles the different themes in the dialogue into an idea protocol that is distributed it to the participants.
- About three or four weeks later there is a new seminar with continued dialogue, new reflections originating on the basis of a new text.
- In each seminar, the idea protocol from the previous one is brought back into the dialogue as the participants are requested to comment on it. By this procedure, all the seminar themes are kept together and weaved into the new idea protocol. This facilitates the gradual development of a collective understanding of central concepts that is called intersubjectivity.

Another technique for stimulating group creativity is called Synectics and was developed by Parnes (1961) and Gordon (1971). They used a 'metaphorical way' of thinking to increase the breath in the participants' thinking. This is done by eliciting the participant in different psychological states such as 'involvement or detachment' and 'autonomy of object'. The analogous thinking is stimulated through a process of making 'the familiar strange and the strange familiar' through four operational mechanisms. 1) personal analogy, 2) direct analogy or example, 3) symbolic analogy (also 'book title'), 4) fantasy analogy. These analogies enable the individual to look at problems in new ways, and thereby hopefully gain new insight into the problems (Stein, 1974).

Analogous thinking

One crucial point in the method of the dialogue seminar is to make one paradigm softer by letting it intersect with another paradigm. One specific strategy is to articulate one paradigm's way of describing a phenomenon and contrast it with the other paradigm's way of describing.

This is not performed without any resistance. Each informant or participant has his or her own notion of what is what and where "the lines" that separate the paradigms should be drawn. One could argue that it probably has necessarily has to be that way since each domain of endeavour has its own concepts and ways of expressing them, not always conveying the same meaning in another field.

A related aspect concerns the question of to what extent the informants or participants are familiar with the paradigms that the dialogue seminar is dealing with. Are they experts in their field with intimate knowledge of subtle distinctions and do they have the ability to articulate these nuances of meanings in a verbal manner?

If the participants use common day-to-day language it is unlikely that any resistance will occur in the dialogue. The dialogue is then perceived as smooth and agreeable and thereby constructive as there would be no questions and real arguments expressing different opinions. Whereas the friction in a dialogue coming from informants who are well steeped in their paradigms gives energy to the dialogue as they are able to articulate their specific opinions.

Whit participants at different knowledge levels such as novice or expert (Dreyfus & Dreyfus, 1986) it is unlikely that there will be any genuine dialogue or energy. The expert then has to take the novices' difficulties into consideration when trying to express an opinion.

Discussion and conclusion

Descriptive languages

In this research, the concept description-language is used to refer to the interaction that a group generating new ideas is engage in. A description-language for such a creative collective is expected to take into consideration all kinds of obstacles to expressing and mediating ideas. An insufficient way of describing ideas in the group, i.e. failures in getting ideas across to everyone, is a waste of resources and everyone's valuable time.

As Isaacs (2000) points out, for a genuine dialogue to be established the group has to develop and maintain trust. He suggests this to be done by 1) listening with an attitude of compassion, 2) showing respect for the cohesion, 3) being attentive and 4) expressing oneself by striving to give form to new ideas. These might be regarded as the basic skills for dialogues in general.

This research project focuses on situations where such basic skills are taken for granted. In a brainstorming session like the one sketched above the dialogue is intense and often characterized by an eagerness to get ideas across. There is also the artistic self-esteem and grandiose narcissism (Köping, 2003) that is logical from an artistic and internal point of view but probably harder to defend in a rationale for commercial life. Additionally, there are external pressures from the assigners' and project leaders' expectations of potential innovative outcomes within reasonable timeframe, etcetera.

As if these kinds of obstacles or difficulties were not enough recent research by Schooler et al. (1997) suggesting that the ability to verbally describe and retrieve a phenomenon (Meissner et al., 2001) is not unproblematic. The term 'verbal overshadowing' refers to the deleterious effects on subjects' ability to recall a face, a wine taste or music from memory after having been requested to describe it verbally. This research suggests that the description-language in idea generating groups

might have to rely upon other kinds of means to mediate ideas that does not have a shadowing effect on the thought processes.

In the introduction of this paper this question was posed:

What kind of language, or depiction, facilitates constructive creative collectives?

When we perceive something we describe it for ourselves first – description and perception is two sides of one coin. This process of sensemaking (Weick, 1993) is dynamic and creative. One of its limitations is that we are only capable of describing those phenomena that we got words referring to. This points to the need for a broader notion of descriptive language. In order to describe more fully what is perceived we need to go beyond verbal language.

In the dialogue seminar method the use of masks from aesthetic expressions such as theatre and fiction is frequently employed (Ratkic, 2006). This has the purpose of increasing the awareness of one's own knowledge and skills on a consciously level in order to elicit a reflecting process.

In his teaching on improvisational theatre Keith Johnstone uses masks to help his students 'let go'.

In normal life the personality conceals or checks impulses. Mask character works on the opposite principle: they are childlike, impulsive, open; their machinations are completely transparent to the audience, although not necessarily to each other. (Johnstone, 1981)

This deliberate use of masks might be an example of such non-overshadowing descriptive-language. In the studies of brainstorming sessions and jazz group rehearsal the activity of interaction is a crucial contribution to the sense making process. There are numerous situations where the mediating of ideas are performed through acting in specific ways. When starting playing a tune the initiator shapes the character and guides the others by the whole body. As for the industrial designers, the interaction was guided by the circulation of the ice cream box within the group. This particular procedure might be described as a relay race of generating ideas in a group.

On Dialogue

From the analysis of the observations at the rehearsal and at the brainstorming session variety in several dimensions is evident. The participants in the brainstorming session differ in background and experience. Most of them also express deviating opinions on the matter of the dialogue. For the group of improvising musicians their negotiations concerned musical form and turns for the soloist. The tensions in the jazz group were not as explicit as it were in the brainstorming session. Each musician had his or her own instrument so the individuals' contributions to the overall picture were not a subject of the dialogue.

In an interview a week after the concert the guitar player who had assembled the group described his frustration about the bass player always trying to govern his co-players. The rehearsal and the concert were documented on video. In these films some players gradually become more silent. This might have been caused by the bass players' controlling style. When playing together every idea got the same weight and space as anyone else's.

As for the industrial designers in the brainstorming session an individual's contribution depended only partly on how talkative this or that person were. In this particular session the focus and task for creative problem solving was a two litre plastic box for ice cream. When someone held this plastic wrapping he or she immediately got the others' attention. The person who wanted to contribute with an idea did not get the others' ears until she or he could get their eyes' attention first. This might be the reason why everyone practically took the box out of the next person's hands before starting to express his or her mind.

On Leadership

In the group of improvising musicians some outstanding aspects became obvious from their interacting when introducing a new tune. The singer, the guitarist and the violinist all contributed with several tunes. They all gave very scant instructions about the tune's characteristics or how they thought it ought to be played. They seemed to take everything concerning musical and artistic expression for granted and that their co-players had the knowledge and skill enough to manage that on

their own. The instructions given were rather suggestions on how they might structure the tune's different parts and if they should follow standard form such as AABA or not.

One might suggest that someone playing a solo exerts a leading function in the music performance. In the brief seminar that followed directly after the concert the audience asked a question hinting at that notion. Both the violinist and the guitarist who had played several solos each stressed that this was not the case. It is not a question of foreground and background in the ensemble. "We are doing this together. Just because we are standing in front of the others doesn't mean that they aren't participating in the solo".

On a superficial level the shift in soloing among the musicians on stage at a concert might suggest that there also is a shift in the function of leading. If that is the case the notion of leadership might need to be defined on a genuinely relational level or at a strictly artistic level.

When the ensemble is rehearsing its interaction is to a great extent based on verbal communication. The members use their instrument to clarify the verbal description. In the concert the musicians are exposed to other conditions than during rehearsals. The demands in a concert situation are manifold and differ in character compared to a rehearsal.

First, there is seldom any verbal communication allowed. If a musician needs a co-player's attention she or he must act in some way. If they know each other just listening to each other's playing might serve to call for attention. But often the listening is more focused on the music that evolves than on a specific instrument. Second, the music is a flow. In concert every effort is taken to preventing this flow to be interrupted before where it is supposed to stop. Any interaction and communication must be performed inside this frame of flow, whereas when rehearsing any of the musicians could stop playing and request the others to do so as well. Third, the audience has expectations on the music as well as on the musicians. To break this course of action takes a lot of courage and conviction.

These are additional demands establishing conditions that might call for other methods of managing and guiding than the traditional ones. If the common hierarchical notion on leadership contradicts the creative process in the improvising group then we have to find ways of working that stimulate spontaneity and multitude on several parallel levels at the same time.

Köping (2003) offers a relational perspective on organizational behaviour implying that we create each other in a continually ongoing process. The social psychologist Israel (1999) maintains that our understanding of reality is created in the interaction between individuals. Thus the leader function must not be in the possession of one individual but rather the result of several individuals acting together. Leadership emerges while the group strives to solve a shared problem. This ties in with Buber (1954) stressing the dialogue aspect in relations; a fundamental characteristic in individuals' interactions.

Out of psychology and social sciences emerge a dimension of philosophy. A conceptualization of leadership should offer a balanced explanation incorporating aspects regarding the leader as well as aspects of the followers. This research project has a relational view of leadership and suggests that this is something that group members might choose to conduct themselves to.

Descriptive language for creative practice

If the facilitator believes that the best results, and the most efficient use of time, are brought about by clear definitions and verbally describing the goal as well as possible, then he probably is vesting considerable efforts in establishing a distinct, clear vision for the project. It is all about motivating and answering the question "why" – "why should we do this or that?".

If on the other hand the facilitator believes that the best results to be developed in a process of working together then he as the leading individual either has to step back, leaving them, and let the group solve their questions in an endeavour of their own or join in the group, not as a leader but as an ordinary member on an equal level in the group setting. Reportedly, this is very difficult because the group members' notion of him as a leader is vivid for a long time after he has left, or tried to leave, the leading role.

The talk about clear visions might sound artificial and distant from what is actually happening and what is actually having an effect on the outcome as well as the process itself. Thus, the creative way of managing a creative collective might be to avoid any talk about leading or leaders. This is not a recommendation that should be perceived as a manipulative one.

References

- Austin, Robert (2003). *Artful Making: What managers need to know about how artists work*, USA, Harlow: Financial Times Prentice Hall.
- Barret, Frank J. (2000). *Cultivating an Aesthetic of Unfolding: Jazz Improvisation as a Self-organizing System*. In Linstead, S. Höpfl, H. (eds). (2000) *The aesthetics of organization*. London : SAGE.
- Belbin, R. Meredith (1993). *Management Teams – så skapas framgångsrika team*, Göteborg; IHM förlag.
- Buber, Martin (2004). *Det mellanmännsliga*, Ludvika: Dualis.
- Csikszentmihalyi, M. (1996). *Creativity – flow and the psychology of discovery and Invention*. New York: Harper Collins.
- Csikszentmihalyi, M. & Feldman, David H., & Gardner Howard, (1994). *Changing the World - A Framework for the Study of Creativity*, Westport: Praeger Publisher.
- Dreyfus & Dreyfus, Hubert L., Stuart E., (1986). *Mind over Machine. The Power of Human Intuition and Expertise in the Era of the Computer*. Blackwell.
- Fleck, Ludwick, (1935) *Entstehung und Entwicklung einer wissenschaften Tatsache. Einführung in die Lehre von Denkstil und Denkkollektiv*. I övers. "Uppkomsten och utvecklingen av ett vetenskapligt faktum. Inledning till läran om tankestil och tankekollektiv". Stockholm: Symbosion, 1997.
- Florida, Richard (2002). *The Rise of the Creative Class*, New York: Basic Books.
- Ford, Cameron F. & Gioia, Dennis A. (eds.) (1995). *Creative Actions in Organisation*, London: SAGE Publications Ltd.
- Gallie, Walter Bryce (1956). *Essentially contested concepts. Proceedings of the Aristotelian Society, Nwe Series, vol.LVI, 1955-1956*. London: Meeting of the Aristotelian Society at 21, Bedford Square.
- Georgsdottir, A. S., Lubart, T. I. & Getz, I. (2003). *The role of flexibility in innovation*. In: L. V. Shavinina (Ed.), *International Handbook on Innovation*. Oxford: Elsevier Science Ltd.
- Getz, I & Robinson, A.G. (2003). *Vos idées changent tout!*, Éditions d'Organisation, Paris. In Shavinina, Larisa V., (2003), *The International Handbook on Innovation*, Oxford: Elsevier Science Ltd.
- Ghiselin, Brewster (1952). *The Creative Process*, New York: New American library
- Gordon, W.J.J. (1971). *The Metaphorical Way*, Cambridge, Massachusetts: Porpoise Books.
- Guildford, J.P. (1950). *Creativity, American Psychologist 5: 444-454*.
- Guildford, J.P. (1967). *The Nature of Human Intelligence*, New York: McGraw-Hill.
- Hammarén, Maria (1999). *Ledtråd i förvandling*, Stockholm: Dialoger.
- Hargadon, A. B. & Bechky, A. B. (2006). *When Collections of Creatives become Creative Collectives: A Field Study of Problem Solving at Work. Organization Science vol.14 no.4, July-August, pp. 484-500*.
- Holme, I. M., & Solvang, B. K. (1996). *Forskningsmetodik – om kvalitativa och kvantitativa metoder*. Lund: Studentlitteratur
- Isaacs, William (2000). *Dialogen och konsten att tänka tillsammans*. Stockholm: Bookhouse publishing.
- Israel, Joachim (1999). *Handling och samspel – ett socialpsykologiskt perspektiv*, Lund: Studentlitteratur.

- James, B.J. & Libby, W.L. (1962). An experimental curriculum for studies in administrative innovation. In *Education for innovative behavior in executives. Cooperative Research Project No.975*, Washington, D.C.: Office of Education, US Department of Health, Education, and Welfare.
- Janis, I.L. (1972). *Victims og Groupthink*, Boston: Houghton Mifflin
- Janis, I.L (1982). *Groupthink. Psychological studies of Policy decisions and Fiascoes*, 2:a uppl., Boston: Houghton Mifflin.
- Johannessen, Kjell S., (1997) *Tradisjoner og skoler i moderne vitenskapsfilosofi*, Bergen: Sigma Forlag A/S.
- Johnson, H.G, Ekman, P. & Friesen, W.V. (1975) *Communicative body movements: American emblems, Semiotica, 15, 335-353.*
- Katzenbach, Jon R. & Smith, Douglas K. (1993). *The Wisdom of Teams – Creating the High-Performance Organization*, Boston: Harvard Business School Press.
- Knudsen, Harald (1998). *4.bind, Sirene – Jazz og ledelse*, Kristiansand S: Høgskoleforlaget AS, Norwegian Academic Press.
- Köping, Ann-Sofie (2003). *Ledarskap och relationer i ett konserthus*, Stockholm: Arvinius
- Langer, Ellen J. (1989). *Mindfulness*. Cambridge: Perseus Books Group, Da Capo Press.
- Langer, Ellen J. (1997). *The Power of Mindful Learning*, Cambridge: Perseus Books Group, Da Capo Press.
- Langer, Ellen J. (2005). *On Becoming an Artist*, New York: Ballantine Books.
- Mednick, S.A. (1962). *The Associative Basis of the Creative Process, Psychological Review 69: 220-232.*
- Meissner, C. A., Birgham, J.C., Kelley, C. M. (2001) *The influence of retrieval processes in verbal overshadowing, Memory & Cognition, 29 (1): 176-186, 2001.*
- Parnes, S.J. (1961). *Effects of extended effort in creative problem solving. Journal of Educational Psychology, 52: 117-122.* In *Stimulating Creativity vol.2 Group Procedures*, New York: Academic Press, INC. Stein (1975)
- Parnes, S.J. (1976b). *Creative behavior workbook*, New York: Scribner.
- Polanyi, Michael. (1983). *The Tacit Dimension*, Gloucester: Mass. Peter Smith.
- Perkins, D.N. (1981). *The Mind's Best Work*. London: Harvards University Press.
- Ratkic, Adrian. (2004). *Avvikelsens konst*, Lic.-avh. vid inst. Industriell ekonomi och organisation, KTH.
- Ratkic, Adrian. (2006). *Dialogseminariets forskningsmiljö*. Diss. KTH. Stockholm: Dialoger
- Rickards, Tudor, (2003). *The Future of Innovation Research*. In Shavinina L. V., (ed), (2003) *The International Handbook on Innovation*, Oxford: Elsevier Science Ltd.
- Rothenberg, A. (1979). *The Emerging Goddess: The Creative Process in Art, Science, and Other Fields*, Chicago: University of Chicago Press.
- Sawyer, R. Keith. (2005). *Creating Conversations – Improvisation in Everyday Discourse*, New Jersey: Hampton Press, Inc.
- Schooler, J.W. (1997). *Scientific approaches to consciousness*, in *Carneige Mellon symposia on cognition, Mahwah, N.J.: L.Erlbaum, 199-*
- Shavinina, Larisa V., (2003). *The International Handbook on Innovation*, Oxford: Elsevier Science Ltd.

- Smith, Ronald E. (1993). Psychology,
New York: West Publishing Company.
- Spearman, C. (1931). Creative Mind,
New York: Appleton.
- Stein, Morris I. (1974). Stimulating Creativity vol.2 Group Procedures,
New York: Academic Press, INC.
- Taylor, Charles. (1971). Interpretation and the Sciences of Man, in *The Review of Metaphysics*, McGill University.
- Utterback, J., Vedin, B-A., Alvarez, E., Ekman, S., Sanderson, S. W., Tether, B., Verganti, R. (2006). Design-Inspired Innovation, Singapore: World Scientific Publishing Co. Pte. Ltd.
- Vedin, Bengt-Arne (1985). Corporate Culture and Creativity Management,
Lund: Studentlitteratur.
- Vedin, Bengt-Arne (2000). Innovation och kreativitet,
Stockholm: Alhambras PocketEncyklopedi.
- Von Wright, G.H. (1971). Explanation and Understanding,
New York: Cornell University Press.
- Weick, Karl. (1993). 'Organizational redesign as improvisation'. I C Huber and W Glickm (eds.), *Mastering Organizational Change*.
New York: Oxford University Press. pp.346-79.
- Weisberg Robert W., (1986). Creativity Genius and other Myths,
New York: W.H.Freeman and Company.
- Wittgenstein, Ludwig (1953). Philosophische Untersuchungen, i översättning, Filosofiska undersökningar, Stockholm: Thales.
- Yukl, Gary, (2002). Leadership in organizations,
Prentice Hall.