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Encryption in human communication: image production in emotionally charged interactions

Brains are one of the several means that animals use to buffer themselves from environmental variations that would otherwise threaten their existence. The study of variations is the key to understanding how brains have evolved and even to life itself. (Allman, 1999: xi)

Introduction

In this paper, we investigate the range and nature of information contained within the verbal communications of individuals participating in a T-group class session in a university setting. We begin with the assumption that with human beings, as with other creatures, immediate interpersonal context exerts a powerful and continuing influence on perception, information processing, emotion, behavior, and communication. Most of this influence occurs outside of the awareness of the individuals involved. The specific components of every context carry the potential for importance, meaning and consequence. Some contexts have such special, and even extraordinary, implications that it matters greatly how one behaves or communicates within them. Therefore, we assume that every behavior and communication is the product of a chain of continuous ongoing conscious and unconscious monitoring, processing, and adapting to those particular characteristics of the environments that have significance for the individuals involved.

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We are aware that within such contexts, images emerge in the verbal communication. Frequently, these images join in a flowing sequence that becomes a story. While at times, these images and stories portray events of safety and emotional well-being, often they portray events with disturbing emotional charge and tension-filled conflict. We see these images as the product of an encrypting capacity of the human mind, the capacity to encode in story that which is of emotional importance and that which is not and/or cannot be known consciously. These images are unique cognitive constructs whose underpinnings possess surprisingly complex, multi-leveled layers of information that usually lie hidden from awareness.

We hope to demonstrate that these images are carefully forged adaptive responses to specific characteristics of the interpersonal environment. We note that imagery emerges readily in an environment where participants are allowed to speak without interruption or instruction. We also note that questioning, interruption or other actions or requirements that limit spontaneous expression can reduce image production. Identifying the components that make up a spontaneously generated image, describing them in concrete and minimally abstract terms, and mapping them on to appropriate contexts, often reveal substantial information buried or encrypted within them. Using conceptual explanations prematurely will result in a loss of information. As we proceed through the data below, we will be listening for the coalescence of images around common properties or themes. We expect that references to immediate contexts will spontaneously come to the minds of the speakers, most likely without their particular notice or elaboration. Without both thematically repeating imagery and a reference to a corresponding contextual issue, we would not consider that there would be sufficient basis on which to argue for any specific encrypted meaning. Uncovering the link between context and imagery provides us a key for understanding the underlying meaning in the communication.

The data

For the purposes of this analysis, we were provided, without our prior review, a verbatim transcription of a T-group session. In addition, the research protocol provides the following information on the research environment. The session takes place in a university setting and is being recorded for research purposes. Each session takes place in a room with a one-way vision mirror and the students are aware that the session is being tape recorded. Also, the protocol describes a system ABC...Z matrices used by the original researchers to analysis the data. We present here the initial eight minutes of dialogue among thirteen college students and their trainer in this T-group class. This is the fourth session.

1. Paula: You know that discussion here last week ... in Adolescence? We went over to the Center, you know . . . we were discussing it... And she came up and she said, 'I think you're kind of juvenile for discussing it out of class'.
2. Paula: That older lady.
3. Kate: Oh, Madeline?
4. Paula: Yes, Madeline!
5. Kate: Well, of her I'd expect it.
6. Paula: What?
7. Kate: Her I would expect it of.
8. Paula: That's what she said. Oh, it just made me so mad. I could've...
9. Mark: Oh yes. Madeline.
10. Sandra: Every time Madeline said something...
11. Paula: I don't know. Madeline is just... well ... She's evil-eyed.
12. Mark: Barb was telling me that she thought that Madeline was treated rather rudely. I don't know. Maybe I have the wrong situation, but ...
13. Paula: What? What situation?
14. Mark: Is that the right person?
15. Paula: Madeline.
16. Mark: And, uh, Barb ... has long black hair?
17. Paula: Yeah.
18. Paula: She doesn't have anything to do with it.
19. Sandra: Well, kind of. Barb and Madeline were (inaudible) through that whole discussion.
20. Sandra: Yeah, but not that.
21. Mark: Yeah, well she was just talking to me afterwards in the Student Center. She thought it was pretty rude the way she was in the bathroom or something and she heard some girls talking about how uh somebody was getting down on Madeline because she was uh saying that she didn't care about people smoking marijuana and they thought that it was so terrible because she was an older lady. And that's what I heard from Marge
22. Mary: I never got that out of my friends.
23. Kate: She asked for some of the things.
24. Paula: Yeah, she was ... I mean like I said that ... I just said that I didn't think that this discussion should have taken place because I thought they were getting awful personal.
25. Sandra: They were. Especially to one girl ... and ... it wasn't the students that were getting personal. It was the instructor. The instructor was coming out and just asking very personal questions. She says, 'Oh, I didn't mean to get personal or anything, but you know, da, da, da.'
26. Paula: But I don't know. Like Madeline and I haven't gotten along since the first day because I said that I wanted tests. You know. So then since I said that, we

haven't gotten along since that, because she didn't want anything. I mean maybe I'm wrong that I want a test but I think that I would learn something from a test.

27. Mark: I think you got easier prerogatives than our class got.

28. Paula: But if you would have left her discuss what she wanted... she didn't want anything. She wanted like one paper the whole semester. One or two papers.

29. Mark: And that was it.

30. Paula: Yeah.

31. Mark: Well, you can't expect that. I mean, like, I don't know

32. Barb: I'm not saying ... you know. I don't know Barb and I would never say anything against her because I don't know her. Mmmm. Well, she's lived next door to me all my life.

33. Paula: But I know we've just dropped a long way since. But I think she had kind of gall to come up to me and say that, especially in front of a group.

34. Mark: Yeah.

35. Paula: Now maybe I'm wrong too, but...

36. Mark: It sounds like the instructor went a little bit too far. I think she was trying to get . . . She said she used to be a personal counselor or something?

37. Paula: Yeah, and I think...

38. Mark: Like maybe she's bringing a little bit too much of that into the class. I like her. She's a good teacher, but she might be trying to bring a little too much of that into the class.

39. Mark: Like this diary thing that we're writing. Do you do that in your class?

40. Paula: No.

41. Mark: Diary? Not at all. That's sort of prying, but she says that... you know ... nobody else can read it. Of course I'm being recorded right now. But that's ... We have to depend on our professional status of our teachers. We had that in what? Skills and Methods?

42. Paula: It seemed like the more problems you had, you took, the better she liked it too. (LAUGHTER) It did! If she had caught me in the mood, the wrong mood...

43. Sandra: She walked past here (inaudible).

43. Paula: I don't care

44. Sandra: She did.

45. Mark: I was wondering if your thing you got together, your syllabus is harder than mine. Like what I have to do is this diary thing Monday through Thursday and one reaction paper and that's it.

46. Paula: Oh, we have (inaudible) tests.

47. Mark: Well, tests and tests whenever she wants to give them on lectures whenever she wants to give them. I was wondering what you got in your class.

48. Sandra: We have the same thing but not the diary. Four papers.

49. Paula: What, five reaction papers? Four, and four either take-home or unit tests. In class and one's a five-page paper and four either take-home or essay ... you know

... tests in class and one What? Five different kinds of paper and no test? One has to be five pages and the other ones are all a page or two.

50. Mark: That's about the same. That was pretty nice the way she ran the whole first class ... she took and just threw stuff down on the board that were suggestions from students and then once they got all down on the board we narrowed them all down to three different options. That was a pretty good idea I thought of hers.

51. Paula: Especially leaving us to pick which one was wanted.

52. Mark: Mmmmmmm. We have an A, B, and C.

53. Paula: That's what we have.

54. Mark: And they're really different complicated things. You got to ... it takes a while to even figure out her syllabus, but once you do ...

55. Trainer: There are some amazing similarities here to what we've talked about thus far to many of the issues and perhaps they are of interest or concern to us here. Just going down my notes, we talked in this class about the problems of or at least concern with an older woman in the class; concern about asking personal questions; the concern with not having enough tests, only having two papers. Let's see, what else here? Oh, yeah, requesting you to keep a diary is kind of like in here we keep a journal. And a concern of having to depend on the professional status of a teacher. Just look at the amazing correspondences of the similarity between that kind of abstract discussion about something else outside here and relating to almost point for point...

56. Mark: Exactly what we have been reading. That's why I put that in, that really in all classes we have to depend on the professional status of our teachers, just like as if they'd be a doctor or a dentist. They're not going to go and get drunk and use those tapes as entertainment for a party or something like that. You just have to trust they don't do things like that, and that a teacher wouldn't ... There are ways of having him removed.

[long silence and whispers]

57. Mark: Do you think our society has pushed that type of philosophy on us, with the constant media talking about ... of, just recently we had that Right to Privacy Act passed. Do you think all that's made us a little bit paranoid about people's listening in to us, people opening up our letters, getting a dossier on us if we happen to be present at a demonstration? I really think that it has made us paranoid a little bit.

58. Sheila: Well, I think probably we had this feeling up until recently that all this was kept in confidence, and now that we realize that it isn't has made us more aware of the fact that what we say and do is open to criticism ... from any angle really or from any number of things. Do you think so?

59. Kate: I don't agree with you.

60. Sheila: I think it's been magnified or probably brought out more clearly.... The fact that we really don't have any privacy.

61. Mark: Mmmmm. Just recently within the past five years I guess, maybe it's just me, maybe it's been known by people from all time, but I don't know, maybe it was just me that was awakened to it recently, the fact that like those Chicago 7, those trials and stuff like that I heard that if you showed up, well, it's a fact, that you show up for a demonstration such as that and it's very, very possible that the FBI or some organization has a dossier on you, because, you know, labeled as a radical. And then possibly if you go for some really prominent job and, maybe a CIA job or something like that, and they go back and go to one of those organizations and say, 'Oh, this guy all-American red-blooded, you know, Yankee Doodler?' Then they say, 'Oh Well, he's participated in this certain demonstration.' I don't know, I believe that could probably keep you back from the job.

Analysis of data

We will note the evolution of the imagery and any references to context as we proceed through the data. Numbers referencing the corresponding line(s) of the session protocol precede each section of our commentary.

(1) The first image portrays 'discussion in a class', apparently on 'Adolescence'. A second portrays 'students leaving class and going over to the (Student) Center', a public place. A third is of students in this public place discussing something that had earlier been discussed in class. The next portrays a woman approaching these students to voice her opinion that there is something amiss about their discussing, outside of class in this public place, what they had been discussing inside of the class. This comment demarks a clear distinction between students discussing something 'here' in class' on one hand, and discussing the same thing 'outside of class' on the other. However, this image also harbors two other implicit images of significant informational content. The first implicitly portrays the woman in the public place having overheard what the students are saying. The message buried within the image is that what one says is in public places is at risk of being overheard by others. Moreover, it is inappropriate and immature to take what is said in this class discussion and repeat it in public.

The second implicit level of the image portrays the woman not only being uneasy about overhearing in public what the students are discussing there from the class, but also taking direct action on her uneasiness by going up to the students and speaking forthrightly to them about her misgivings.

We can identify and preserve the interactional details of the images by expressing them in the present voice. 'When you and I are in a public place and engaged in a discussion that is a continuation of what we were discussing in class, everything that we say is in danger of being overheard. Someone, even

you or I, can take note of this, recognize that there is something not right about it, and stand up and express misgivings about it directly.'

(2-21) The obvious content of the images includes references to anger at an older person, someone being 'evil-eyed', someone being treated rudely, some confusion as to what setting or person is being discussed, overhearing someone in a public bathroom and criticism directed at an older person unconcerned about marijuana smoking.

We note that in this brief interaction four different locations are referenced. In each location, different people are talking to someone else or are overhearing or listening to someone else talk about someone else. We have a vivid portrayal of the contents of a classroom discussion spilling over into more and more remote places and discussions among more and more persons. We also note that the image of being 'evil-eyed' comes to mind, quickly embedding a sense of being looked at in some threatening manner. And we have the image of someone critical of an older person who is unconcerned about and implicitly sanctioning illegal activity. In the present voice, we could say, 'We are in a situation where what we might say in one place is not only overheard but is repeated to others elsewhere, from place to place and from person to person. There is something 'pretty rude' about the way people were talking others in a public place. Things feel quite frightening, even inappropriate and people who should know better seem not to care.'

(22-24) Someone is portrayed as trying 'to get' information 'out of' others. A discussion is portrayed as one that should not have taken place at all, for the participants were 'getting awful personal.' We note the continuing critical tone. In other words, 'Further, we are trying to get very personal information out of each other. There is something amiss about this and we wonder if indeed it should be taking place at all.'

(25) From the prior image of students being 'too personal' with each other, this new image organizes around this very same attribute, but now places it as being enacted by an instructor in a classroom. The instructor is portrayed as asking very personal questions of students and acknowledging, in a near flippant way, that she has some uneasiness herself about whether she should really be 'getting personal', but is going to go ahead and do it anyway. Again, we note the emotional tone. The language used to quote the instructor, 'I didn't mean to get personal or anything, but you know, da da da,' is sarcastic and suggests an annoyance close to anger.

There is here a communicative process worth noting. A particular quality or attribute of interpersonal behavior that carries negative emotional charge, i.e. 'getting too personal,' is initially presented with respect to one situation and set of persons, the students' in discussion with one another. Suddenly in the next image, the identical quality of behavior is portrayed as being enacted by different persons in an entirely different setting, the teacher in her dialogue with the

students. This same specific behavior or quality of interactional behavior is the focus in both settings. Emotional charge accompanies each image. In short, the minds of these students are organizing and constructing different distinct images around this same attribute or quality of interaction. The emotional charge and meaning attached to one is likewise attached to the other.

(26-33) Here the image portrays one student having the gall to come up to another, ‘especially in front of a group,’ and say something. The ‘especially’ implies that what was said was not appropriate for public announcement or revelation at least among those individuals, or perhaps in any public place at all. There is one image presented and another implied. In the overt image, communicating to another person in front of a group is to engage in behavior that can be characterized as galling, that is, aggressively insensitive, brazen, and irritating. In the implied image, communicating the same things to that person in private would not be at all so problematic or galling and have a different meaning and consequence: ‘When we are alone together, just you and I, there are things that you might say to me that I find acceptable. But when you and I are in front of certain others and you say the same thing to me, I find it an act of ‘gall.’

(34-38) The next image returns us to the classroom and the problematic teacher who is asking personal questions of students in her class. This time she is portrayed as going too far in her efforts to get personal information from the students, something that is more to be expected from a personal counselor than a teacher. This introduces another embedded image and statement, that of personal counseling, where pursuing and addressing very personal information about a client is legitimate, in contrast to such inquiry feeling somehow illegitimate in a class setting. She is seen as mixing up these two separate roles. We note that we have a mix of emotional tone. This is the first explicit positive image of the session. ‘I like her. She’s a good teacher, but-’ is combined with the concern over pressure for personal revelation. In other words: ‘In this class setting the instructor is going too far in trying to get personal information out of us. She is driven to try to get information out of us that is not appropriate for the classroom, but is more legitimate and appropriate for the setting of personal counseling.’

(39—41) From concern about personal exposure in the class, the students turn to the assignment of a class diary. They identify it as a ‘sort of prying’. ‘Prying’ captures an intrusive quality that the students are sensing. It extends seamlessly to the danger of who is going to be reading what they write down in assignments. The emotional tone is again more negative. We could translate what we have thus far as, ‘Look, these are prying kinds of questions, be they directly from the teacher in the class or be they in the assignment for us to write in a class diary, paper or tests. We are not all together trusting about who is going to be reading what we reveal about ourselves in our discussions and writings in this class.’

The student then continues, 'Of course, I'm being recorded right now.' Until this point, the students in the T-group class have been producing narrative images about interactions between themselves and a teacher in another class, concerns about written assignments and about who else will read what they write and concern about confidentiality and public exposure expressed in different contexts. This next statement abruptly turns away the focus and attention from 'then' to 'right now', from 'us and them over there' to 'us right here in this class'. And the action selected from the class, and focused on by the speaker, is that of being tape recorded by the instructor as they speak. This simple reference of, 'I'm being recorded right now,' contains an enormous amount of information embedded within it, information not directly stated. It announces that the instructor decided to bring a tape recorder into the classroom and record everything that the students say. It announces that the instructor will then take the tape out of the recorder afterwards and in one way or another play it back to himself, to others, or have it transcribed to be used in written reports and publications. This particular contextual condition has been selected out as the first one to be mentioned directly about the T-group class. We can ask ourselves what the action of being tape recorded by the trainer means and implies to the students in this T-group class. And we can ask ourselves also how might we approach this question. We could come up with our personal speculations, opinions and beliefs on what it would mean and to us to be tape recorded were we students in such a class. Or we might recall comments that others have made about what it was like who have been in a similar experience. Or we could postulate an answer based upon our own hypotheses and experience. We might turn to the literature that research what the impact of being tape recorded has on individuals who are participating in such situations as this, in classes or in T-group-like experiences, or in group or individual therapy. It might be quite interesting to have posed this question to these students before and somewhere along the way about what it meant and implied to them to be tape recorded. We then would have a record of various conscious hypotheses, speculations, subjective experiences and opinions about it. We might look directly to what the students have been saying up to this time in order to see if this might give us a glimpse of what the experience of being taperecorded has meant to them, perhaps in ways outside of their awareness, and to see if it appears to have influenced what they have been discussing. We note that they have been discussing situations in another class that are alarming to them due to the threat of inappropriate public access to what they are doing and saying. And it was at just this moment that the student added, 'Of course I am being recorded right', that is, in this T-group class itself.

Were we instructors in this class and listening in this manner, we might note me following. We have given our students the opportunity to say what comes spontaneously into their minds free of instruction or interruption. And. like any

researcher in the field of behavioral and cognitive neuroscience, we assume that the behaviors of our subjects are not randomly selected. And we consider each detail of the surround, the environmental conditions, as data that is just as important as are the specific communication behaviors of the participants. We do not consider any biological organism or human subject as functioning entirely independent of the environment or in any way substantially indifferent to it. We then would note to ourselves that the students have now referred to our tape recording them. We would then recall that the very first image that they had produced in this session portrayed a situation where what they discussed in a class was also being discussed in a public place where others overhear what they have said. Then we would place our act of tape recording them right alongside this initial image. We see that indeed the presence of a tape recorder in the class renders directly the implication that the T-group class is a public place where others will be overhearing what they are saying. By revisiting retrospectively the full array of images and comparing them anew as juxtaposed to our act of tape recording, we can form a hypothesis that links together this contextual event and the communications that took place in its presence. Were we to try to capture all of this information and our building hypothesis in one statement it might sound like this.

“You have brought up that I am tape recording what you are saying here. The first story that came to your minds at the start of our meeting today portrayed a situation where you were talking in a public place about what you talked about in class, and you were being overheard as you spoke. The image of talking in a public place captures the essential implication and meaning of my tape recording you. My tape recording of you is an open conduit to what you are saying here. It creates a situation where you actually are talking to one another in a public place while you are talking in class. Your conscious awareness of this was pushed aside until now. But it was buried or encrypted within this first narrative about another class experience. And then you portrayed, especially vividly in the next set of images, how what is said publicly is repeated and overheard on and on, from place to place and person to person. You then portrayed someone who strongly disapproved of this public exposure of a class discussion and took action by directly challenging those who were doing it. This sequence of images that came to your minds encrypts in an image your disapproval of my recording you on tape. We should also consider that they carry an implicit model for correction of the problem here. In the form of an story about someone else you suggest how you might act upon your disapproval by standing up to me and telling me that you do not approve of my tape recording you and that you don’t think that it should be taking place at all. You next portrayed a teacher who puts very personal questions to students, acknowledges doing it, says that she does not mean to do it, and blithely goes ahead and does it anyway. You disapprove of

this and question whether it should be taking place at all. You explicitly attribute to the behavior of this teacher the very implications and meanings linked to my act of tape recording you. There is something too personal and prying about her behavior and about my taping recording you. Personal needs and motivations, beyond that of the role of a teacher, to get as much personal information out of you as possible are portrayed as underlying such acts of intrusive questioning and intrusive recording. And the images that came to your mind imply that these needs are intruding into her and into my professional behavior and judgment, so that even if she and I harbor some mixed feelings and uneasiness about doing this, we are going to do it anyway. Outside of your awareness, you have used your reflections about the behavior and its qualities of another teacher as a vehicle to portray this very issue with me. You then put forth an image of how certain discussions about an individual belong only in private conversations with that individual and that any similar discussion with the individual in the presence of others is an act of gall. My tape recording your comments to one another implies that what you discuss among yourselves here, within the boundaries of this classroom, is also being overheard and discussed in the presence of anyone who listens to this tape or reads what is transcribed by the tape in the future. You are implying that there is a 'kind of gall' associated with my putting out this microphone and recorder. It appears that my act of tape recording you further generated a story in your minds of a teacher unduly pushing to get personal information out of you, information that is more appropriate for the setting of personal counseling than a classroom. You portray a teacher who is confusing the two environments. You are also addressing the contradictory implications and demands upon you embedded within my act of setting up a college class that is also a T-group. In your portrayal of the teacher who is mixing up her teaching role with that of being a personal counselor you are presenting an image that portrays, as well, the meaning and implications of my offering you a hybrid of T-group therapy and a T-group class. You have thus again communicated, in encrypted form, that I am placing demands upon you that are more appropriate for personal therapy than for a classroom, and this is heightened further by my tape recording what is said. In addition, through these stories and reported events you make it clear that not only the tape recording, but other conditions as well, introduce confusion and uncertainty into the environment. Written materials of some kind feel unsafe and are of concern to you. As you have started to point out, this includes any assigned diaries, papers or tests, which you have identified as a form of prying. You have been portraying indirectly in these other scenarios how I have introduced demands that extend beyond what might be seen as fair or legitimate. In fact, I might now address your portrayal of an older woman who did not care if someone smokes marijuana or not. You expressed some disappointment in this woman, as if you expected her to know better. Indeed,

you may well be referring to another quality or implication of my tape recording you, that there something questionable about it, something which I, as member of the older generation and in a position of responsibility, am ignoring”.

(41) A student refers to a course that they had taken called ‘Skills and Methods’. Apparently, this course addresses the issues of how private and personal revelations by students or clients or research subjects should be handled. The students are acknowledging that they are in a position of personal vulnerability. To whom are these recordings and these records going to be revealed? How can a teacher, instructor or researcher ethically use the private and personal disclosures of students or subjects? They are searching for some trustworthy guarantee of protection in the ‘professional status’ and integrity of their teachers. Next, however, a student abruptly refers back to the probing personal questions of the teacher in the other class. ‘It seemed like the more problems you had, you took, the better she liked it, too.’ This image suggests the student’s view that the teacher’s emotionally charged personal investment underlies such prying questioning. ‘The better she liked it, too’ suggests the sense of being eagerly desirous. And when she is successful, experiencing the pleasure of success, gratification and even triumph. But, this dimension is addressed only after the T-group itself and the tape recording have faded from the focus and awareness of the students.

This shift suggests that again the images of this other teacher and her class serve as the vehicle through which the students express, outside of their awareness, their emerging perceptions and concerns about the professional and personal desire inherent in their instructor’s choice to tape record them. Just at the moment, of mounting emotional charge is present, the group as a whole breaks out into laughter. Reflection, narrative, and reflective conversation ceased. Instead, everyone erupts together in an abrupt mutual emotional discharge. The speaker then states that if she were by chance ‘caught in the wrong mood’ while experiencing such behavior by this teacher, she would be capable of taking some sort of action to express her disapproval.

To summarize, the tape recording of the T-group process class was mentioned directly. The next communication suggests the question of whether or not to trust academic established authority and its ‘skills and methods’. A portrayal followed immediately of a teacher aggressively pressing the students to reveal personal matters about themselves in order to gratify herself personally. This was followed by an outburst of laughter. And this was joined by a direct expression of potential aggressive action by a student toward the teacher being discussed.

(42-44) Apparently, just at this moment the very teacher from the other class, who is the topic of critical discussion walks past the T-group classroom and can be seen from within through a window in the door. Here is another explicit acknowledgement that the room is open to public view. A student

immediately responds, 'I don't care. Another continues: 'She did.' These statements reflect mounting distress. They also capture the sense of someone not caring about the teacher's response one way or another. It also echoes the quality of indifference portrayed by the earlier image of this teacher saying, 'Oh I didn't mean to get personal or anything, but you know, da da da'.

(45-49) Repeated images emerge portraying classroom conditions that require the students to respond with written assignments, evaluation and feedback - a syllabus, a diary, a reaction paper, and tests. The image portrays a teacher as arbitrary and insensitive. She 'tests and tests whenever she wants to give them on lectures whenever she wants to give them'. And the focus turns back again to a discussion of papers, reaction papers, essays and tests in various combinations. We note the subtle embedding of another critical comment about a teacher in the seemingly innocuous discussion of classroom assignments.

(50-54) The tone of the imagery shifts now to becoming quite positive. The image is of a teacher who is appreciated for how she ran a class. She is not described as prying and probing. Now she is respectful, open and intellectually sensitive to the desires and choices of the students. She invites suggestions, writes them on the blackboard leading to a distillation of the ideas into three different options, A, B and C. A calm, mutually respectful, effective and open teacher-student relationship is portrayed. The students are pleased that she allows them to pick the option they prefer. They see her take 'really different complicated things' that 'take a while to figure out' and make them accessible to the students.

An image of A, B or C comes to mind and another student notes that that 'A, B, C' is 'what we have here'. We recall that the researchers who are gathering this data are using an ABCDE matrix for the analysis of this session and the students might be aware of this and referencing it here. So we may have another specific reference to the immediate context, the students are participating in group meeting is being studied for research purposes.

How might the image of throwing 'stuff down on the board' make sense as a contextual comment? Here are a few possibilities. The students may, in the form of an image about a teacher, be speaking to their own efforts to lay out some options for discussion. As yet the trainer has not spoken so we could not argue that he has thrown 'stuff down on the board', though his quietness had left room to the students to do so. They may also be providing a picture of a teacher that does so as a model for the behavior that they would like to see from the trainer. Perhaps it is an invitation for the trainer to intervene.

Also, we must attempt to explain the major and abrupt change in the tone of these images. Here is a group of students who, so far, have communicated in highly critical images, often about teachers. Now the images are entirely positive.

We consider the possibility that the students have some level of awareness of the negative emotional environment that they are both speaking to and creating.

There are multiple emotional dangers here. It appears that the context in which the students find themselves has disturbing aspects. Yet, their opportunity, or need to speak to it, may also have disturbing consequences. Especially due to their vulnerability to the authority of the trainer, it would seem possible that the students would feel some anxiety if they perceive themselves as too critical. We consider that the positive image of the teacher and students working together can serve to reduce the mounting conflict, to reassure the trainer and the group that the emotional environment is safe and to suggest needed action on the part of the trainer. We also consider, with the possible overt reference to the research context, (“ABC” is “what we have here”) that the students find something interesting, important and emotionally rewarding in this research environment.

(55) The trainer intervenes. He notes that, while the issues that the students have been discussing have not consciously addressed this particular T-group environment, in fact they have done so. There are ‘amazing similarities’ and ‘amazing correspondences’ between the two classes. He adds, in passing, two pieces of contextual information that we did not know. He refers to notes that he is taking during the session. And he speaks of a journal the students are keeping for the T-group, which he notes as corresponding to the image of the class diary that had been assigned in the other class. He also notes the issue of asking personal questions, the upset over an older woman and the issue of having to depend on the professional status of a teacher, suggesting that he understands them to be related in some way to the T-group. The trainer does almost precisely that for which the students had praised the teacher of the other class. He encouraged participation from the start by listening and gathering information. He then throws ‘stuff down on the board’, so to speak, by outlining what he has heard, all the time making an effort to hear aspects of the current situation that might be of concern to them. We now consider that not only will the trainer’s remarks to be an additional context to which the students will respond, but also his not mentioning the critical references to privacy and the tape recorder will be an additional context.

(56) Created new in this moment, this story succinctly weaves together a number of the issues being discussing here. With a quick acknowledgement of the trainer’s remarks, the speaker immediately moves to images that reference classes at this school, concern over the professionalism of teachers, especially related to the handling of tape recordings. Images of having to trust and depend on the professionalism of teachers, doctors and dentists rest, side by side, with images of getting drunk and using confidential tape recordings as entertainment at a party. An image then follows of teachers who do such things facing removal from their jobs. Long silence and whispers are noted to follow. This is aggressive material. It is noteworthy that the specific fact of the tape recorder in the T-group, along with all the images of threatening personal exposure, was overlooked by the trainer in his intervention and is the central concern in the imagery that follows here.

(57-58) Again, here, we have a series of images that speak to a struggle over issues of personal privacy. While consciously arguing that perhaps they are ‘a little bit paranoid’, they still manage to embed in the communication images of ‘people listening in to us, people opening up our letters, getting a dossier on us’. It is as if they are trying to talk themselves out of something and it is just not working. There is the image of people growing aware that what they initially believed was being kept in confidence was, in fact, not. And ‘what we say and do is open to criticism ... from any angle really or from any number of things’. Also, there is the image of the danger of speaking out or “demonstrating publicly’ against policies backed by authorities. Such speaking out and direct confronting of authority can lead one to being targeted for criticism, at best, and for extraordinary and dangerous scrutiny, at worst. Based on our model and this data, we conclude that the students are conveying some level of awareness of potential danger were they to speak directly about those things that concern them in this class.

(59-61) The images continue in a similar vein. There is the overt statement; people ‘really don’t have any privacy.’ There is further elaboration on the theme of the danger of speaking out overtly and publicly. One’s loyalty is questioned and even one’s future careers are threatened. Issues of privacy and the price of speaking out continue to be of concern and would seem to offer support for our present hypothesis. We would of course listen for continued support or correction of the hypothesis as the data continues to unfold.

Based on this data before us, we consider the adaptive pressures on the students in this group. We acknowledge their concern over the harm that could come to them were they to protest overtly. It is possible that students receive credit for taking this class. Possibly, they are graded. They may be looking to the Trainer/Instructor/Researcher to provide them with guidance or recommendation in their future careers. We remember that there may be people behind a oneway mirror who may have influence over their lives as well. The tapes of the session may be studied or shared by people that could be in the position to affect their lives. The trainer may be, or once was, or might be in the future, an instructor in another class. The students may worry that the trainer could discuss the students with other faculty. And they may have such affection and respect for the trainer that they would not want to cause him suffering by being critical of the process. Significant emotional pressures must come to bear on the members of the group as they work over the implicit and still not fully conscious emotional realities of the environment in which they find themselves. Yet, these realities are recorded, encrypted and seamlessly embedded within the ordinary stories that have come into their minds. We have reviewed here the first 1/7 of the session, approximately the first 8 minutes.

Discussion

Any analysis of a phenomenon involves a selection of variables. That selection may be formal or informal, correct or incorrect. We have approached the data here with the assumption that there exists, in human communication, a tight relationship amongst context, image, and emotion. Most authors acknowledge that emotion is central to human information processing and human communication and closely linked to image production (Panskepp 1998; Bucci 1997; Glezerman and Balkoski 1999). However, few, in our experience, have so recognized the organizing contribution of context upon imagery, as has Robert Langs. (1976a, 1978, 1979; 1982; 1985a, 1985b, 1985c; 1986, 1992c, 1998). His work deserves careful study by anyone interested in human emotion and human communication. While his work stems from his meticulous observations made in a clinical psychoanalytic setting, his work is not 'of' psychoanalysis. It is not founded upon the assumption of discrete unconscious intrapsychic entities or complexes that autonomously influence the conscious life. (Langs, 1976b, 1986, 1987a, 1987b; 1987c; 1988a, 1988b, 1989a; Smith 1987, 1988, 1991, 1999b; Dorpat, 1987, 1991, 1991b; Dorpat and Miller 1992; Goodheart, 1987a, 1987b, 1989, 1993; Haskell 2000, 2001.). Some analytically oriented thinkers working to build the bridge between psychoanalytic theory and cognitive science also note the relationship between imagery and context. It is our sense, though, that most view this connection to be quite loose. It differs in a very significant way from the very tight relationship between context and imagery that we have hoped to demonstrate here.

We assume that all contexts carry some significant inherent implications, qualities, and meanings. Conscious mental processes overlook many of these. However, mental processes that are not conscious fully perceive those very contexts, implications, and meanings that are being overlooked. These processes respond further by significantly influencing the selection and assembly of the particular images that emerge into the conscious mind of the participants. There, these consciously overlooked qualities; implications and meanings are portrayed in encrypted fashion. To best account for these phenomena and to build on Langs' work, we can designate this, in short hand, as an operational mental process of 'non-conscious perception and encrypted response'. This can be formulated more extensively as an 'ongoing dynamic continually evolving interactional feedback process of non-conscious perception of immediate context and responses to these perceptions encrypted in emotionally charged image'. This takes place amidst the other mental activities involved in human interaction and communication.

We hope that this discussion will be useful to those cognitive scientists and behavioral neuroscientists interested in investigating human emotional communi

cation and behavior. This hypothesis of an operating principle of non-conscious perception of context and encrypted response is empirically testable. Other groups or dyadic settings, where free associative communication is allowed and the contextual variables are relatively defined, could be investigated with this operating principle in mind. This would provide testing of the explanatory and the predictive power of this operational principle. For example, the first image in our data was about someone directly voicing disapproval of students carrying a class discussion into a public place. Could we have predicted, based on this operational principle of unconscious perception and encrypted response, that the discussion that followed would have taken roughly the tack it did? Could we have said the following after hearing this first communication? 'Here is an initial story portraying classroom material with psychological sensitivity being discussed and overheard in a public setting. Someone is voicing disapproval of this, and taking confrontative action to curb it. Using the operational principle we might predict the following. There will emerge increasingly intense images regarding the public exposure of matters that should be kept private. Images of disapproval will be leveled toward the behavior of authorities that invade privacy or sanction its invasion'.

In the analysis of data, we have suggested a few corollaries to this operating principle. In passing, someone will mention one of the most important contextual issues being responded to unconsciously. Based on this, and as a test of the validity of the operating principle itself, we might have predicted that this would occur in the data presented above. It did, in the comment stated in passing, '-Of course, I'm being recorded right now...'. We also note the continually changing dynamic nature of the context itself. Any communication that takes place then becomes part of the context as well. We might hypothesize as well that the communications from the person who created the context will have special influence. We would also expect to see in the imagery models of correction of contextual matters of emotional concern.

This principle of unconscious response and encryption within mental operations can be tested quantitatively. Image, contextual components and emotion are measurable entities. According to Bucci, images can be studied in terms of the degree of their intensity, immediacy, concreteness, specificity, clarity and power to evoke vivid experience in the other (Bucci, 1997, pp 187-88) Emotion is measurable in tone, type and intensity. Context is quantifiable in both type and frequency. Experimental settings of varying context could be studied. Langs and his associates have developed a scoring system based on these variables. (Langs and Badalamenti, 1990d; Langs, Bucci, Bryant, Ferguson and Thompson 1988; Langs, Fox and Abraham 1987; Langs, Udoff, Bucci, Cramer, and Thompson, 1993). This has been used in mathematical analyses and the application of dynamical systems theory to interactional systems. (Abraham 1992;

Albanese 1988; Badalamenti and Langs 1990a, 1992a, 1992b, 1992d, 1992e, 1992f, 1994; Badalamenti, Langs and Cramer 1993; Badalamenti, Langs, Cramer and Robinson 1994; Badalamenti, Langs and Kessler 1992; Goodheart 1992; Langs and Badalamenti, 1990a, 1990d, 1991, 1992, 1994 a, 1994b, 1994c; 1996; Langs, Badalamenti, and Cramer 1992; Rapp, Mimenez-Montano, Langs, Thompson, and Mees 1991).

We have analyzed the above data without regard to specific speaker. By taking the communication as a whole we have been able to select for investigation contextual forces over hypothesized intrapsychic or interpersonal ones. We recognize that hypotheses based on intrapsychic or interpersonal models may reveal interesting and unique information, information not revealed by our analysis. However, we think that there is here a special note for researchers. Whenever we select, as primary, hypotheses that minimize or overlook the effect of context, we assume an unproved hypothesis about the nature and degree of our contextual contribution. We run the risk of not scrutinizing each of our behaviors in terms of their full interpersonal implications. We believe that the above data suggests that these meanings and implications will be encrypted within the images that emerge in the communications. As we have seen in this data, the requirements of research itself introduce contextual complications. Yet, research requires contextual complications. However, if at least we can hear, in the encrypted images of our subjects, the meaning of such communications, we have learned more about the nature of human communication and the processing of emotionally charged information. It is no small reward.

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