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"The Ivory Tower" on an "Unstable Foundation": Playful Language, Humor, and Metaphor in the Negotiation of Scientists' Identities

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"*The ivory tower*" on an "*unstable foundation*":

Playful Language, Humor, and Metaphor in the Negotiation of Scientists' Identities

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Abstract

In this essay we argue that metaphor and language play generally should be analyzed in the context of actual conversations, not as a peripheral or incidental part of the discourse, but rather as an integral part of both topic-centered and relational work. We examine several instances of playful metaphor, humor, and irony that occurred during a one-hour focus-group discussion among a group of scientists discussing their role in communicating about science with laypersons. During the course of this discussion, word play, humorous insults, and the elaboration and reconstruction of metaphorical idioms are used for a variety of purposes including reinforcement of group boundaries, re-constitution of the group's assigned task, and joint development of a complex set of ideas about group members' identities as scientists working in a publicly-funded lab. Throughout this conversation, the social structuring and relational functions of playfulness and metaphor interacts with the accomplishment of the purposes of the conversation. We argue that analysis of language play, humor, and metaphor is strengthened by attention to the purpose of the talk and, conversely, understanding how the purpose of talk is accomplished is strengthened by attention to the participants' use of playful, metaphorical, and humorous language.

"*The ivory tower*" on an "*unstable foundation*":

Playful Language, Humor, and Metaphor in the Negotiation of Scientists' Identities

Introduction

Cognitive approaches to communication often assume that communication is primarily serious, and the instances of communication most worthy of scientific study have to do with exchange of information and ideas, conducting the business of social life. Within such a task-oriented view of communication, metaphorical and playful language may be discredited, treated as peripheral, or explained away in terms of more serious purposes. However, Dunbar (1996) argues that language use helps maintain social structure (coalitions and hierarchies) both directly, as individuals share the pleasure of talk and indirectly, as people give and receive information about relationships in the extended social group ("who is grooming whom"). It follows that these apparent "distractions" from the "real business" of even the most serious conversations may in fact be vital to the success of the "real business" itself.

Playful and "non bona-fida" (Raskin & Attardo, 1994) uses of language, including metaphors as well as irony and humor, have generally been treated as both distinct and separate from the "serious" and "literal" language in which groups accomplish actual tasks. In part this may be due to the tendency of metaphor theorists to use artificial, "made up" metaphors as examples (Haser, 2005; Howe, 2008; Nerlich, 2003) and humor theorists to draw their examples from published joke book collections (Martin, 2008). As Garrod (1999) points out, it may also be due in part to the methodological difficulties posed by the interactivity and complexity of natural conversation. Recent research, however, undermines this separation and suggests that the

playful use of humor, irony, and metaphors contributes *both* to the social dimensions of group interaction *and* to the accomplishment of tasks.

Several researchers have recently reported on the importance of humor, irony, and teasing in developing and maintaining group cohesion in the workplace (Terrion & Ashforth, 2002) and among friends and family members (Gibbs & Izett, 2005; Norrick, 1993; Tannen, 1984). Fazioni (2008) shows that playful teasing, humor, and irony can contribute to serious information-exchange tasks in a workplace situation. Ritchie and Dyhouse (2008) show that metaphors often have a basis in language play, and serve both a cognitive and a social function, consistent with Dunbar's (1996) claims about language as an extension of primate grooming. In her analysis of a series of conversations between an IRA bomber and the daughter of one of his victims, Cameron (2007) shows how the re-use and transformation of metaphors contributes simultaneously to the development of interpersonal understanding and empathy and to the informational purpose of the conversations, the participants' increased understanding of the event itself and of the political and personal context in which the bombing took place.

These developments lead us to ask how participants in a task-oriented group (specifically, a group of scientists engaged in a discussion of their role in communicating science to the general public) might use language play, including metaphors, humor, and irony, to accomplish and perhaps transform the communicative work of the group. Are the social-facilitative functions of playful language use separate from the task-oriented functions of "serious" language use, or, as Fazioni's work suggests, do the social-facilitative and task-oriented functions sometimes inter-mingle? Does the pattern of repetition and transformation of metaphors which Cameron reports occur in other sorts of

conversations, and if it does, how does it contribute to the social and task-oriented

processes of the group?

The setting.

The conversation on which this analysis is based occurred in a one-hour focus

group within an extended day-long meeting. The overall meeting was designed to bring

together scientists engaged in a major environmental cleanup project that at that stage

involved basic scientific research (not yet applied) and interactions with representatives

of various "stakeholder" groups in the communities in which applied research was being

considered. After an initial meeting in which the project and the format for the day's

activities were described, members of each group were sent to separate locations, each

with a communication facilitator, to engage in a focus-group style discussion designed to

respond to a common set of questions about the group's identity and role, the interests

they brought to the meeting, and their insights about scientist-layperson communication.

Each group was given a flip-chart with instructions to diagram the results of their

discussion. Their task was to identify their role in the context of the whole project

system, including regulators, agency staff, community members, stakeholder groups with

legal standing, and focused scientific sub-projects that contributed to the large,

overarching project system. Because the project was devoted to novel approaches to

remediation of contaminated sites, it was of particular interest to curious stakeholder

groups and individual community members.

The event organizers labeled the group studied here "professionals" to account for

the mixture of scientists and administrative staff such as project managers and

communication staff. Two members of the group were administrators, not scientists.

Most of the scientist members of this group had worked together extensively and knew

each other quite well prior to the meeting. In the following transcribed sections of the

group interactions, all of those who engaged in humor and metaphor, except the

facilitator, were scientists.

Method.

    This analysis is based on a transcription of the "professionals" group discussion

that was made from a tape recording shortly after the meeting. The authors began by

reading through the transcript to identify the format, major purposes and themes. The

transcript was then reformatted into short segments representing *intonation units*

(Cameron & Stelma, 2004) by placing a break at each change of speaker, at major

disfluencies ("er," "hmm," and repetitions of partial or complete words or sentences) as

well as at the end of completed sentences and independent clauses. For the purpose of

our analysis, which is not concerned with production of language at the level of words

and phrases, the intonation unit organization simply provides a convenient way to

reference short sections of text, since complete sentences appear infrequently in the text,

and speakers frequently moved back and forth among topics even within sentences.

    Instances of metaphorical language were identified by procedures detailed in

Cameron (2007; 2006; Cameron and Stelma, 2004). Then instances of word-play, irony,

and humor were identified, using cues embedded in the transcript itself. By this time,

several clusters of playful and figurative language had been identified; these were further

analyzed to identify themes, schemas, and perceptual simulations associated with each

(Barsalou, 2007; Gibbs, 2006; Ritchie, 2006; 2008a; 2008b). Finally, the occurrence of

these clusters was mapped against the overall conversation, and the themes and

perceptual simulations were analyzed in relation both to the immediate discursive context and the overall progress of the focus group conversation.

Results.

The focus group conversation can be divided roughly into four overall segments. The first segment, approximately lines 1-50, is mostly talk about organizing the group. A second segment (lines 51-225) consists primarily of talk about the participants' identity and roles as scientists, with occasional recurrence throughout the remainder of the conversation. The subject of *communication* is introduced at about line 226, and extends through about line 670, when the fourth and final segment begins, devoted to filling in the information on the flip-chart (the ostensible "business" of the meeting). The third segment, about communication with the public, can be further sub-divided into educating the public about science (226-380), garnering public support (380-450, 489-520, and 622-643), input into political decision-making (450-488), networking with members of various community organizations (527-614), and an extended discussion of a "*partners*" metaphor for community relations (643-650), and community education as outreach (650-677). These themes are reprised during the final segment, in which the group focuses on the assigned task of filling in the chart.

Although there are flashes of word-play, metaphor, and humor throughout, the bulk of it occurs during the initial organizational segment, focusing on the naming of the focus group and organization of the discussion, and in lines 191-215, where an extended riff on a "*construction*" metaphor seems to mark a transition from a playful, teasing banter to a more serious attempt to grapple with the questions that had been posed to the group.

"Who are we?" The decision by event organizers to label the scientists' group as the "professionals" is the occasion for a brief bit of joking at the very outset:

0001   Facilitator: I guess, we're calling ourselves "the professional group."

0002: We're all scientists. Ya right.

0003   Participant1:: That's right.

0004   Facilitator: Or "*thereabouts*"

0005   Participant 1: "*Thereabouts*"

0006   Participant 2: "*Pretty much*."

Professional can be interpreted in contrast to *amateur*, in which case a working scientist, who takes science completely seriously and is totally committed to it, would certainly qualify as *professional*. However, neither laboratory scientists nor academic scientists ordinarily consider themselves "professionals," since the everyday use of the term to refer collectively to doctors, attorneys, engineers, and other graduates of "professional schools" invokes a second contrast, between *professional* (as practitioner) and *researcher* or *theorist*. The use and echo of the metaphorical idioms, "*thereabouts*" (based on a spatial metaphor) and "*pretty much*" (based on an object / quantification metaphor) activate simulations associated with uncertainty about location and quantity respectively; the echoing of the facilitator's idiomatic expression of ambiguity activates culturally-based associations with vaudeville comedy routines and introduces a teasing response to the facilitator that persists throughout the first segment of the discussion. The negative implications of "*professionals*" are taken up in a playful way by another participant almost immediately:

0007   Participant3: Can we, can we change our names if we want?

0008   Facilitator: Sure

0009   Participant3: As first order of business

0010   Participant3: Nerds and geeks

0011   Participant1: Ya

0012   Facilitator: So. We're changing our names to what?

0013   Participant3: Geeks and nerds.

Here, Participant 3 replaces the indisputably general term "professional" with one more warmly self-deprecating, "nerds and geeks," which a scientist might apply to others in that guild as a way of establishing common ground playfully (as being extended to anyone who is obsessed with either technology or science to the exclusion of ordinary social activities). Participant 3 then proposes changing it by merely reversing the order, leaving the playfully self-deprecating implications of the terms in place and humorously displaying the whole topic of naming as trivial, while the terms "geeks" and "nerds" take on positive implications, if only in contrast to "*professionals*." The point is driven home in the final utterance in this segment:

0014   Participant4: I've been *called a lot of things* but never *professional*.

    (laughter all around).

"I've been *called a lot of things*" is a commonplace idiom that is usually taken to imply *name-calling*, in particular, "*unprintable*" names. Thus, it is frequently used to imply that whatever label follows the phrase, "but never…" is *worse* than the unprintable invectives the speaker claims to have been called in the past. In this closing shot, Participant 4 activates the negative simulations associated with "*professional*" in a way that underscores the rejection of "professional" and emphasizes the commitment of the

scientist members of the group to the "geekish" pursuit of knowledge for its own sake.
The "pursuit of knowledge" theme appears repeatedly throughout the remainder of the
conversation: The "geeks and nerds" joke might or might not have appeared had the
event organizers *not* labeled the group as *professionals*. Given the sensitivities of
scientists, in an age when everything seems to be "*for sale*," it seems likely that the
"*professionals*" theme would have appeared in some guise sooner or later. It is
interesting that the potential association of "*prostituting*" science for commercial gain
was *not* directly invoked at any point in this conversation, but this passage did activate a
frame that persisted throughout the opening segment of the conversation, the part we
focus on here. The underlying tension between "science for its own sake" and "applied
science" reappears in several of the metaphors discussed in the next few sections.

There are no right answers. A second bit of playful joking involves the meta-
communicative task of setting up ground rules for the discussion. The following segment
comes immediately after a bit of playful banter over who has the worst hand-writing (and
who is thus ineligible to be appointed to take notes):

0038   Participant1: I *hasten* to *point out* that

0039   Larry's done this before

0040   and he knows all the right answers.

At first this sounds like mere teasing banter, directed both at Larry ("teacher's pet") and
at the process. But it is turned into a meta-communicative discussion about the nature of
the focus-group process itself when the facilitator protests:

0043   Facilitator: There are no right answers.

0044   Participant1: There are always right answers.

0045   Participant3: Or they're all right answers, one or the other.

0046   Participant 4: Well

0047   Participant 3: There're either none,

0048   Participant 4: put it this way

0049   Participant 3: or they're *all* right

0050   Participant 4: they seem *productive* answers

0051   Participant 5:   Oh h h h h (laughter)

Participant 1's cynically ironic insistence that "there are always right answers" threatens to undermine the purpose of the focus group, by framing it as an exercise in second-guessing what the event organizers expect to hear. But Participant 3 adeptly converts the cynical claim into a generic claim to universal acceptability, with distinct overtones of "political correctness" that seems to confirm the point about his having done this before. Participant 4 comes to the rescue in a way that reinstates the bantering, playful tone by converting "right" to "productive," in a way that elicits a groan from Participant 5 and general laughter. "*Productive*" activates simulations associated both with the metaphor vehicle, "*manufacture*," and the ordinary idiomatic metaphorical usage, as in "a *productive* meeting." These standard simulations are activated only to be contrasted ironically with the cynical futility implied by the preceding claim that "There're either none… or they are all right," and thus underscores the tension between "*pure*" and "*applied*" science previously activated by the quip about not being called a "*professional*," and by the same token underscores the scientists' uneasiness about their changing roles.[1]

"**Three citations**." Much of the playful banter is self-deprecatory, directed either at the scientists themselves, or at science as an institution. An interesting instance comes as the group makes the transition into a more serious discussion of their roles as scientists.

0070   Facilitator: and your everyday role is?

0071   Participant 1: to do science. To do our science.

0072   do *outstanding* science.

Here, Participant 1 underscores the contrast to the implications of "*professional*" by contrasting it with the "everyday" role of simply doing "*outstanding* science." "*Outstanding*" is a common metaphorical idiom associated with superiority and pride in one's work; the contrast is repeated several times in slightly different words before the topic of *communicating* the results of science is broached, and the positive implications of "*outstanding*" are ironically undermined:

0078   Participant 2: and to communicate knowledge to

0079   to somebody

0080   Facilitator: to somebody? Was that

0081   Participant 2: hopefully to three other people (laughter)

0082   Facilitator: so that somebody is, each other?

0083   Participant 2: three citations.

The "somebody" in line 079 has an air of futility about it, because of its vagueness and generality. However, when the facilitator repeats the word, Participant 2 immediately replaces it with a phrase that is something of an in-joke among scientists (and academicians). "*Three citations*" refers metonymically to a common criterion used by

tenure and promotion committees and other groups that evaluate the quality of scientific

and scholarly work: Success is measured by the number of times an article is cited, and

three is a common threshold, calling to mind research findings that a typical article in a

scholarly journal is read by no more than three people – an implicit reference to the

inherent futility of the publication process. "Three citations" thus underscores the

contrast to "*productive*" and "*professional*" by activating the academic schema with its

associations of isolation and the fear of futility (not being cited at all) experienced by all

academicians, including scientists. It also contrasts with the communication of science to

the general public (*outside* the scientific in-group), the ostensible purpose of the meeting.

In any event, it elicits the intended laughter from the group before members of the group

co-operate with the facilitator's attempt to turn the discussion to communication *beyond*

the internal communication within the science community.

"***Swimming in money***." Following the joke about the "three citations" criterion,

discussion turns to applied science, then to communication with regulators, members of

various interest groups, and policy-makers and decision-makers (the purpose of the day-

long event).

0143   Participant 2: It is interesting that all of us work in [publicly-funded

research]

0144   none of us can…

0145   that didn't *come to our minds*,

0146   yet that's often times our worst *deficiency*.

0147   Participant 3: Oh ya

0148   Facilitator: this group right here?

> 0149   Participant 2: Ya. We can talk about how we failed and succeeded these,
>
> 0150   but clearly, that is our *biggest shortcoming*.
>
> 0151   If it weren't we'd all be *swimming in money*. (laugh)

The "*deficiency*" and "*shortcoming*" metaphors activate simulations of scarcity and

failure that are contrasted ironically with the idiomatic metaphor, "*swimming in money*,"

reinforcing the preceding ironic contrast between doing "*outstanding*" science and

garnering at most "*three citations*." This quip introduces a theme that comes up

repeatedly during the ensuing discussion: The group members' common dependence on

public funding, and the fact that they collectively give too little attention to

communicating with the policy-makers and influential groups that control their funding.

Almost every time the importance of educating the public about science or

communicating the results of their research to the public comes up, the secondary effect,

of hoped-for increase in public *support* of science arises, almost always with the double

meaning of both "approval of science" and "funding of science."

No more ivory tower. Shortly after the "*swimming in money*" quip, the

metaphor, "*stewardship*" is introduced by the facilitator: Scientists are described as

"*stewards*" of the science itself, of the tax money that funds science, and of the land.

This leads to the introduction of a familiar metaphor for self-directed scientific inquiry

that is conducted for the sake of the knowledge itself, without regard for potential utility:

> 0191   Participant 5: Ya. There really is no more *ivory tower*.

The schema activated by "*ivory tower*" sustains and amplifies the contrast originally

activated by the "*professionals*" / "*geeks and nerds*" banter and reinforced by the "three

citations" quip. The facilitator attempts to get the group to focus on the "*stewardship*"

metaphor, but instead another participant returns to the "*ivory tower*" metaphor:

> 0195   Participant 4: Jack said something,

> 0196   one way of

> 0196   of *capturing* part of that,

> 0197   ah, change of role is

> 0198   ah, no more *ivory tower*.

> 0199   It's probably, we're,

> 0200   we're *not there* now

> 0201   it's probably not too *far in* the future.

> 0202   Participant 2: I've never really *seen the ivory towe*r. (Laughter)

"*Ivory tower*" is such a familiar idiom for academic research that, when it was first

introduced by another participant, Jack, it may not have been processed beyond the

semantic level. The *JOURNEY* metaphors, "*not there* now" and "not too *far in the*

future" refer most obviously to "*progress toward*" a condition expected to be experienced

at a certain time – but Participant 2 re-instates the underlying spatial metaphor and at the

same time brings to life the metaphor underlying the stock idiom "*ivory tower,*" along

with its associated perceptual simulations, both the visual simulations of an actual

structure and the emotional simulations of isolation and the pleasure of "pure science" –

all contrasting ironically with the implied reality of the conditions in which Participant 2

(and the other participants in this conversation) actually work.

This quip was clearly intended by Participant 2 as an ironic (and metaphorical)

comment on the situation they all face as scientists working for a publicly-funded

laboratory with research objectives that are ultimately very much applied. However, the

quip leaves Participant 2 open to a bit of gentle teasing (a "nip" in Boxer & Cortés-

Conde's terminology, which will be discussed more fully later in this essay) that leads

into a long and somewhat complex riff on the underlying metaphor:

    0203   Participant 4: You haven't.

    0204 They never did *let you in* did they

    0205   Participant5: Is that what you *dream about, in the night*, Jim

    0206:   *ivory tower* you just go to sleep

    0207 and the first thing you get is

    0208 the seven million dollar grant from

    0209 to do whatever you want

    0210 from the MacArthur Foundation

It seems evident throughout this passage that the speakers are feeling their way as

they go, playing with the words, their sounds, their metaphorical entailments. From the

group's unwillingness to let go of the "*ivory tower*" metaphor and follow the facilitator's

attempt to get them to expand on the "*stewardship*" metaphor, it appears that "*ivory

tower*" and all that it entails is on their minds; perhaps made more salient by the

preceding discussion of public support for science and by Participant 2's rueful admission

of never having "*seen*" the "*ivory tower*" (never having enjoyed the pleasure of practicing

scientific investigation for its own sake).

"I've never *seen* the *ivory tower*" is offered as an explicit contrast with the

situation of a university scientist, who might be said to *inhabit* an ivory tower. But the

response, "They never did *let you in*, did they?" brings out irony in the comment, and

implies that "Jim" (Participant 2) must not have satisfied the "*gatekeepers*" as to his

worthiness to enter "*the tower*" and practice pure science. At the same time, "They never

did *let you in*, did they?" begins an elaborate and sophisticated development of the

underlying "*structure*" and "*citadel*" metaphors. If "they" (the keepers of the citadel)

"*never let you in*," the implication is that the citadel is a desirable – and exclusive - place

to be. This implication is reinforced by the ironic question that follows: "Is that what

you *dream about in the night*, Jim?" These two sentences powerfully activate an image

of someone – Jim – in a dream-like setting, standing forlornly at the entry to a tall tower,

a citadel with walls of polished ivory, vainly seeking entry.

These perceptual simulations, activated by the quip, "*they never let you in*" –

yearning, hope and frustration, as well as a contrast with the security of those "*inside*" the

"*tower,*" who control entry into it – are attached by implication not merely to Jim, but

also to the entire group. As government scientists, members of this group must pursue

many of the same goals as university scientists, particularly finding funds, doing

research, and publishing, but also have to represent government projects to the public.

These comments, then, may also be understood as implicit comments on the task at hand

– to locate their roles and responsibilities among the complex social system being

diagrammed in the group. The following passage underscores this point with the

metonymic reference to the MacArthur Foundation (famous for its large, no-strings

"genius grants"), which by implication contrasts with their position as having to justify

their science to government clients and an interested – perhaps hyper-interested – public.

The speaker then contrasts the dreamy fantasy of the ivory tower with the pending

application of basic science to the real world of remediating contaminated sites, an "*open*

pit, unstable wall" – a quick comic shift that introduces perspective and the problem of

trusting a perhaps "*unstable foundation*":

      0211   and you *go up into the ivory tower*.

      0212: What the, *open pit, unstable wall*

Another participant, now fully aligned with the speaker's metaphorical transformation of

the "*ivory tower*" fantasy, echoes:

      0213   Participant1: Ya the *unstable*.

And the speaker concludes the irony with a second play on the word, "*foundation*":

      0214   Participant4: Ya, instead of the *ivory tower*,

      0215   we're in an *unstable foundation*.

The phrase, "*unstable foundation*," not only completes the blend of metaphors the group

has been working out, it also activates complex simulations associated both with the

structural metaphor vehicle and with the social and career situations in which metaphors

related to "*stability*" and "*foundation*" are ordinarily used. This complex brew of

perceptual simulations expresses their collective unease about having to spend so much

energy seeking public support, without which they cannot continue to do their science.

Thus it also completes the theme introduced by the beginning banter about how to name

the group, and apparently resolves the tension activated by that theme.

      Consistent with Cameron's (2007) approach, this long bit of metaphor-based

word-play appears to have been spontaneously generated, in part in response to the words

themselves and in part in response to the foregoing conversation and especially to the

underlying contrasts and contradictions between the group members' public roles as

publicly funded scientists and their private identities as disinterested seekers of

knowledge. This passage marks a transition from a playfully ironic, teasing, and

occasionally resistant phase in which the group collectively comes to understand, then

comes to terms with its part in the larger event of which this one conversation is only a

small part, to a more co-operative and ultimately highly productive discussion of the

issues they were initially assigned to address. As in the reconciliation dialogues analyzed

by Cameron, these scientists collaboratively modify, combine, and transform a set of

stock metaphors, drawn from their common culture (Nerlich, 2003), in a way that

expresses both their social relationships and their shared perception of their situations as

"pure" scientists working on "applied" problems.

Discussion.

       With respect to the first two questions we posed in the introduction, it appears that

the participants in this exchange, for all of their seriousness, *do* engage in extensive

language play, and that they accomplish several things through their playful use,

transformation, and distortion of idioms and metaphors. The scientists assigned to the

group (some of whom had prior close relationships as members of a research team)

differentiate themselves from the non-scientists assigned to the group and reaffirm their

own unique identity *as* scientists. They tease the facilitator, test her sense of humor, and

critique the focus group process itself (Plester & Sayers, 2007), as a prelude to their

eventual cooperation with her in accomplishing the group's assigned purposes. They

explore and work out uncomfortable ambiguities in their roles as scientists, both in the

"geeks and nerds" comment and in the extended development of the "*ivory tower*"

metaphor. Through the self-deprecatory comments and the ironic teasing, they affirm

their social solidarity and affection among themselves (Attardo, 1994; Gibbs & Izett,

2005; Martin, 2007; Norrick, 1993) and, once she has passed the test of their teasing,

bring the facilitator into the "in-group." Crucially, it is also apparent throughout that they

indulge the playful banter as a source of shared *fun* (Dunbar, 1996; Martin, 2007; Ritchie

& Dyhouse, 2008), which further contributes to the solidarity of the group. With respect

to the third question we posed, the humor and word-play is not separated from the task-

oriented conversation, but rather contributes both to the task of organizing and

conducting the conversation and to the primary assigned task of establishing the group's

identity with respect to the communication of science.

     The complex uses of metaphor. The ironic joking about "geeks and nerds" and

"*professionals*" at the beginning appears to serve several purposes simultaneously.

Along with the sequence "We're all scientists. Ya right," "that's right," "thereabouts,"

"pretty much" (lines 0002-0006), this early bit of play comments on the way the focus

groups were organized and spotlights the distinction within the larger group between the

sub-group of scientists and the two non-scientists present. The critique of the focus

group process is taken up in the by-play beginning with "Larry's done this before" (line

0039) and continuing with the facilitator's assertion that "There are no right answers"

(line 0043) and the participants' cynically teasing assertions that "There are always right

answers" and the subsequent word play (lines 0044 to 0051). Although playful in tone,

this can also be interpreted as a way for the scientist group to seize control of the meeting

and test the facilitator's sense of humor, then, when she passes the test, to bring her into

the group (Terrion & Ashforth, 2002; Plester & Sayers, 2007).

     More importantly, the "right answers" and "ivory tower" word-play ironically

underscores the scientists' lack of power in sustaining their historic roles as scientists (for

scientists, finding the right answers is the modus operandi). In the contemporary

environment they must continually divert time and energy from creating knowledge to

justifying their work in order to sustain funding, as illustrated by their participation in this

day of talk, not about science but about communicating science to non-scientists, rather

than actually *doing* science. Far from being a diversion or distraction from the assigned

task, this blend of metaphor development with ironic humor expresses the ambiguity of

their role in contemporary society and sets the stage for effectively completing the task.

The distinction between scientists and non-scientists, and the scientists' assertion

of their unique and shared identity as scientists continues with the in-joke about "three

publications" (line 0083) and the joking about their failure to communicate with non-

scientists and consequent shortage of funding ("*swimming in money*"). It also appears to

be at least part of the function of the complex riff on "*ivory tower*" (lines 0198-0210).

Consistent with Cameron's (2007) findings, the scientists in this group both draw

on and develop their relationships through repetition and transformation of each others'

metaphors and quips. Boxer and Cortés-Conde (1997) distinguish between the *bonding*

and *biting* use of apparently aggressive humor within a group, with what they call *nips*

occupying an in-between niche. Both *bonding* humor and *nips* are evident in the verbal

by-play among these scientists. Some of the initial teasing directed toward the facilitator

appears to have the *biting* quality of humor directed at an out-group member, but these

instances are moderated by the deflection of the humor onto in-group members.

Similarly, the comment, "They never did *let you in* did they?" seems aggressive at first

glance, at the very least a corrective "nip," except that it is evident in the context that it

describes the situation of all the participants, including the speaker. There is a slightly

bitter edge to the "*ivory tower*" riff, as demonstrated by the "*unstable foundation*"

metaphor, but it is difficult to identify a target of the supposed aggression. The early

joking about the naming of the group does have an evident target in the conference

organizers, represented by the facilitator, but the "attack" is rather mild and appears to

serve more to affirm the bonds among the in-group members than to emphasize the

difference between in-group and outsiders. Thus, the "sheep" vs. "wolves" distinction

suggested by Gibbs & Izett (2005) is difficult to apply here, since the irony is self-

directed and the humor depends on the ability of everyone present (including the

facilitator) to recognize the incongruity. The "aggression" in the examples of humor here

has the playful quality of "rough-and-tumble" play, consistent with Martin's (2007; see

also Apter, 1982 and Norrick, 1993) claim that the apparent aggression in humor is

frequently playful, especially when it occurs within a social group.

Also consistent with Cameron's (2007) approach, several of the metaphors in the

scientists' focus group are collaboratively produced. The "*ivory tower*" sequence is

probably the best example here. It is introduced by one participant, let drop, picked up

and re-introduced by another participant, then developed (and combined with the

previously introduced "*support*" metaphor) by a third participant – with echoing support

from a fourth participant. The manner in which the group members interact in the

production of this metaphorical narrative suggests that it expresses a common, probably

frequently-discussed, concern. Its central location and pivotal function within the

conversation, and the degree to which it is elaborated, suggest that it expresses a felt

tension within their identities (individual and collective) as scientists – in essence, the

topic of the conversation. Thus, the collective development of this metaphor provides a

means for the scientists simultaneously to express their own concerns through an amusing transformation of a stock metaphor and at the same time initiate the accomplishment of the task they had been charged with.

Consistent with Nerlich's (2003; Nerlich, Hamilton, & Rowe, 2001) findings, the participants in this exchange drew on a culturally-salient stock of metaphorical idioms ("*swimming in money*" and "*ivory tower*") as well as joke formulae ("I've been called a lot of things, but…") to support their own particular purposes; it is evidently important to attend to the role of stock metaphors and idioms in the larger culture within which a segment of talk occurs. "*Ivory tower,*" as well as the other stock idioms used in this conversation all have complex resonances, and activate both positive and negative implications, within U.S. society generally and in particular within the science and engineering community. Their use here can only be understood within and as part of that broader cultural usage. In turn, their use here and elsewhere contributes to (and, over time, will tend to modify) the underlying "cultural representations" (Sperber, 1996).

Task and Social Functions of Language Play: Establishing a Role. A large part of the purpose of the focus group was to establish the "professional" group's identity and role with respect to the overall event. The purpose of this hour of conversation was to work out their role in communicating science to the public and to others in the group, for example through the "*stewardship*" metaphor. There was also at least implicit pressure on the scientists to take on a key role in an area decidedly outside their expertise, the role of "public communicator." However, the scientists in this group, perhaps stimulated by the troublesome title, "professionals," or perhaps by the overarching topic of communicating science to non-scientists, used the metaphor, word-play, and teasing to

work out some serious issues about their identities as scientists. This begins at the outset

with the playful objections to the title "*professionals*," proceeds in the more serious

discussion of the "*steward*" metaphor, and culminates in the complex transformation of

the "*ivory tower*" metaphor, in which the previously introduced double-metaphor of

"*support*" (as *encouragement* and *funding*), is combined with a literalization of "*ivory

tower*" to produce a double-meaning around the "*foundation*" metaphor. All of this

explores and brings to the surface the complex and troublesome relationship of "*pure*"

science to *money* – and by implication, the difficult task of explaining science to the non-

scientists who control budgets.

The patterns described in the foregoing are consistent with Dunbar's (1996)

claims about the "grooming" functions in language, including playful language use

(Ritchie & Dyhouse, 2008) and ironic teasing (Gibbs & Izett, 2005). These scientists

used their joking and teasing about the focus group, culminating in their elaborate

development of the "*ivory tower*" metaphor, simultaneously to reaffirm their group

solidarity and to come to terms with the task at hand, to describe their dual role as

scientists and as communicators. What appeared at first to be a prolonged digression

before "getting down to work" was, instead, a crucial part of accomplishing that work (cf.

Fazioni, 2008).

Metaphor, humor, and play. As the joking about naming, and the complex

transformations of the "*ivory tower*" metaphor illustrate, there is often a metaphorical

basis to humor (Martin; 2007; Ritchie, 2005). Part of the humor of the riff on the "*ivory

tower*" metaphor stems from the incongruity of the images (Attardo, 1994; 2001), which

readily map onto the (to these scientists, very real) incongruity of practicing science in a

situation of financial uncertainty – a "*crumbling foundation*." There is a playfulness to

the serial transformation of "*ivory tower*," first from an idiomatic reference to "*pure*

science" to an actual structure, a citadel with restricted entry, to a structure with a

crumbling foundation, and finally bringing this metaphorical transformation full circle so

that the (metaphorical) grant-giving "*foundation*" is characterized as "*crumbling*."

The term "stewardship" is taken directly from mission statements created by the

funding agency, the U.S. Department of Energy, to describe the role the Department

plays as the "steward" of the legacy nuclear contamination at government sites

throughout the country. Until those sites can be decontaminated and opened for future

use, their dangers must be contained and research done on how to eliminate them –

through effective "*stewardship*." This term in itself is metaphorical, with entailments in

religious imagery, past statesmanship, and "foundations" and "citadels" of castles.

Another vital implication is in the direction of trust – in particular, the public's trust in

the sovereign power's management of public resources. Thus, "stewardship" can be seen

as a complex metaphor in this discussion, used playfully but with serious entailments by

the participants. Elsewhere in the discussion, in fact, "stewardship" is used seriously in

reference to the scientists' roles and responsibilities.

The schemas and perceptual simulations activated by the core metaphors

discussed in the foregoing go to the heart of the dilemma facing scientists, increasingly

including those within academia as well as those, like the participants in the focus group,

who work in publicly funded labs. The pursuit of scientific knowledge "for its own sake"

is increasingly difficult; scientists must match their skills in research, analysis, and

theory-building with a very different set of skills, those required for communicating

about their science to an uncomprehending public, and building "*support*," both political

and financial, for their work. "*There is no more ivory tower*." Even the MacArthur

Foundation "genius grants" last only one year, and then the recipient must return to the

realities of modern science. "*We're in an unstable foundation*." The word play and

humor allowed these scientists to bring those simulations to the surface and resolve them,

or perhaps to incorporate them into their identities as scientists working in a publicly-

funded research facility.

Perceptual simulation in analyzing metaphor, irony, and humor. It appears

that some of the metaphors ("*swimming in money*") may have been, at least initially,

processed primarily through simple semantic connections (Barsalou, 2007). "*Ivory

tower*" may also have been processed semantically at first, but the joking comment that

"I've never *seen the ivory tower*" and the extended transformation of the metaphor that

follows call for interpretation in terms of a complex set of perceptual simulations,

including simulations of introspective perceptions of thought and emotion as well as

simulations of visual, tactile, and other external perceptions. The perceptual simulation

approach, then, may not be necessary for understanding stock metaphorical idioms in

casual use, but it is helpful in understanding innovative and creative use of metaphors,

especially in a situation in which complex thoughts and feelings are being expressed.

As a group, these examples illustrate the value of considering the activation and

interaction of both extensive schema-based simulations (Gibbs, 2006) and more limited

perceptual simulations (Barsalou, 2007; Ritchie, 2006; 2008b) by figurative language. In

the foregoing, it appears that some of these metaphors activated complete schemas,

consistent with Gibbs (2006): In particular, the metonymic "*three citations*" appears to

have activated a complete *academic science* schema. "*Ivory tower*" appears at first to

have activated a very limited range of simulations, but when it was picked up again and

developed, an entire complex schema was activated, then systematically re-structured, in

a way that appears to have been facilitated by the perceptual simulations it activated. The

activation of complex and contradictory perceptual simulations explain the emotional and

cognitive effects of the extended riff on "*ivory tower*" and the early word-play

surrounding the naming of the group. What is incongruous about these jests is the mis-

match between the activated simulations and the perceptions (including thoughts and

feelings) that would be expected in a conversation of this sort.

Conclusions.

The talk sequences analyzed in the foregoing were serious, purpose-driven

conversations about issues that mattered deeply to the participants. The frequent

instances of playful language, metaphor and metaphorical narratives, joking and teasing

were not contrary to the serious purpose of the talk, but contributed to its accomplishment

in important ways. Through our analysis we have demonstrated the importance of

attending to the simulations potentially activated by language, and the manner in which

participants in talk collaboratively produce, alter, and *play with* language and ideas.

Figurative language and language play serves several purposes in discourse, often

simultaneously. It often advances the "purpose" of the talk, and at the same time creates

and affirms social relationships among the participants.

We have deliberately focused on conversation that was produced for a particular

purpose, conversation in which the participants are engaged in accomplishing tasks

beyond the task of producing talk itself. As our analysis demonstrates, the social

structuring and relational functions of playfulness and metaphor interacts with the accomplishment of the purposes of the conversation. We argue that analysis of metaphor, language play, irony, and humor is strengthened by attention to the purpose of the talk and, conversely, understanding how the purpose of talk is accomplished is strengthened by attention to the participants' use of playful, metaphorical, and humorous language. In future work we plan to compare the talk analyzed herein with talk produced by differently-composed groups under ostensibly similar conditions, as a way of better understanding how the social composition of a group influences and interacts with the use of metaphor and playful language.

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[1] These scientists are frequently called upon to respond to questions from non-scientists, including legislators, about the application of science – a role quite different from that traditionally associated with "pure science," and the topic of the meeting within which this conversation takes place.