

'Wait, wait: Dan, your turn': Role, Relationship and Assessment in the Design Critique

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***Abstract:** This paper explores assessment in graduate-level industrial design education. In particular, it considers how the assessment of students' design work is delivered and who delivers it. Through approaches associated with conversation analysis and ethnomethodology we analyze segments of tutor-student interaction to consider how assessment is performed by an instructor and by students in the opening moments of design concept reviews. We also consider aspects of what assessment consists of, and how its performance may contribute to participants' understanding of what criticism is and how it is to occur in the context of design education. Additionally, although the data was not collected with attention to the gender of the participants, our analyses of the opening moments of the design reviews indicate that participant gender had some impact upon the interaction. Our discussion of assessment in the concept reviews argues for an approach to critique that provides both students and instructors with opportunities to reflect upon and debate some of design education's taken-for-granted practices and performances.*

Keywords: assessment, design education, face, gender, social interaction, conversation analysis, turn-taking.

1. Introduction: delivering assessment in design education

This paper explores assessment in graduate-level design education. In particular, it considers how the assessment of students' design work is delivered and who delivers it in the DTRS10 corpus of 'industrial design concept reviews' (in which graduate-level industrial design students discuss their ideas in a group). The effective delivery of assessment is an important professional skill for designers to acquire and so learning how to assess design work could be considered an important part of graduate level design education. Accordingly, in this paper we consider how, in part of the DTRS dataset, a tutor performs assessment himself and also coaches other students to assess, in ways that may significantly contribute to students' understanding of what assessment is and how it is to occur. Here we focus

on how assessment begins in the opening moments of the reviews of the students Mylie, Sydney, Eva, and Alison, but we will also discuss two other sequences of interaction, since they provide additional context to our discussion of the openings. Our initial proposal for this paper aimed to cover positive and negative assessment in both undergrad and graduate reviews, however, after repeated viewing of the videos (and reading the helpful review comments on our proposal), we decided to attend to a few instances in which assessment is distributed amongst the participants, that is, both Simon (the instructor) and the students.

This paper asks, how is criticism of students' design work delivered in the social context of the design critique? To answer this we engage in a fine-grained exploration of: how judgment is offered, who offers it, and what that judgment consists of. The issue of assessment and how it is performed is of significance to the field of design because learning how to judge, and learning who should judge, is a central aspect of design education. Donald Schön, for example, outlines the importance of assessment in architecture education, using the performance of judgment as the structure for his theory of reflection-in-action. The studio setting in which students and professors engage in dialogue about problems and solutions forms, Schön asserts, the core aspects of reflective practice. In his influential books *The Reflective Practitioner* (1984), and *Educating the Reflective Practitioner* (1987) Schön presents a discussion (about the design of an elementary school) that occurs between Petra (a female architecture student) and Quist (a male professor). Schön uses this discussion to argue that: 'The language of designing is a language for doing architecture, a language game which Quist models for Petra, displaying for her the competences he would like her to acquire' (1984, p. 81). Schön's position is that, through learning to mimic Quist's vocabulary and method of delivering expertise, Petra will explicitly learn aspects of architecture's discipline and implicitly learn how to be a reflective practitioner. But, as we demonstrate in the paper, the 'language of designing' displays greater complexity than simply revealing explicit 'competencies' for instructors to model and students to copy. Instead, the 'language of designing' appears also to be a vehicle in which the institutional and gendered roles of instructors and students are performed in various ways that may be consequential for design education and practice.

2. Theoretical framework and methods

The issue of how assessment is managed in the openings of the concept reviews is discussed here through a theoretical framework that draws on aspects of ethnomethodology (EM) and conversation analysis (CA), while also extending these approaches. From EM we have adopted a focus on how the participants make sense of what is going on in situated practices wherein the social roles of 'teacher' and 'student' are oriented to and enacted in specific ways (Garfinkel 1984; Heritage 2005). From the associated approach and method of CA we adopt Jefferson's transcription system (Sacks, Schegloff & Jefferson 1974 (Appendix 1)), and the analysis of sequences of talk that share certain characteristics (i.e. the opening

moments of the reviews). We extend a CA-oriented approach by drawing on the concept of 'face' within our analyses. Here, 'face' is the socially-constituted esteem that an individual is aware of and emotionally invested in maintaining within social situations. Accordingly, 'face-threatening acts' are behaviours that risk damaging the esteem of oneself or others (Arundale 2010; Bargiela-Chiappini & Haugh 2009; Goffman 1955). Arundale (2010) posits face as 'an integral part of the interaction among participants' (2079) and notes that, during group interaction, face is associated with aspects of relational connection and separation. Also, we widen the (usually) strictly local focus of an EM stance by considering how these interactions may have consequence for wider aspects of design education and practice; and, finally, we extend EM/CA's focus on talk by also considering aspects of gaze and gesture through a fine-grained visual analysis of some sequences of interaction.

Characteristically, EM/CA-influenced research begins with an inductive perspective that favours relative disinterest in the data, and this was our method. Initially, we looked at both the undergraduate and graduate videos and approached the analysis of the DTRS data as 'an examination not prompted by pre-specified goals [...] but by 'noticings' of initially unremarkable features of talk or other conduct' (Schegloff 1996, p. 172). That is, we tried as much as possible to avoid imposing onto the data a set of preconceived ideas that we would attempt to prove, and instead we watched and listened until we noticed a particular set of 'unremarkable features' and 'conduct' that caught our attention: the opening moments of the graduate-level concept reviews and a few other sequences of talk, wherein the authority to assess student work is enacted by participants in interesting ways. The openings of several of the reviews were notable because, when compared to other DTRS data, something unusual was occurring: the students' work was not only being critiqued by the instructor, Simon, but also by the students themselves. Indeed, in several instances, Simon makes specific requests of students to judge other students' work, thereby requiring the students to link their role of being a student to that of being an assessor. As we will show, the students perform these critiques in ways that demonstrate their ability to do what their instructor asks of them, while also maintaining affiliation with each other.

Once we had identified particular segments of the graduate-level ID video a detailed transcription was made of each, following the Jefferson notation system, which allowed us to create a highly accurate transcript, in which was included information such as overlapping talk, pause length, intonation, volume, and prosody. Along with this we carried out a frame-by-frame visual analysis of significant moments in the segments to further determine what was taking place in the interaction. As Edelsky notes in her paper, 'Who's Got the Floor?' (1981), a transcription does not necessarily capture the 'feel' of what is happening in a video, particularly the shifting social 'floor' of discussion, so the visual data shown in Figures 1-5 of our paper, when read together with our transcription, is intended to provide more complete information of what was occurring (Haugh 2009). The search to capture what is going on in interaction is also a search for an adequate representation of

that interaction, a far from simple task (Edelsky 1981; Hammersley 2010). In total seven segments of data were transcribed in detail, six of which are discussed here.

2.1 Turn-taking in social interaction

Central to our discussion is a consideration of how taking turns at talk is managed during the concept reviews. Taking turns during a conversation, while seemingly unremarkable, is actually a highly organized activity that involves determining who has the current turn and who might take the next one in any given interaction (Sacks, Schegloff and Jefferson 1974; Housley 2007). Taking turns involves their allocation, which may occur when a current speaker chooses the next speaker (e.g. by saying, as Simon does at one point: 'Dan, your turn') or when a speaker 'self-selects' and contributes to the interaction without being specifically invited. The interactional turn - i.e. sentence, word, gesture, etc. - ends when a 'transitional relevant place' occurs, after which another speaker may self-select or be assigned to respond. If a turn is taken before such a transitional relevant moment participants may interpret that turn as an interruption. Generally, in any given interaction, a speaker's intonation, word choice, tempo, etc. signals to a potential future speaker that the current speaker's turn is ending and so it is transitionally relevant for the next speaker to begin talking. In this way a conversational 'floor', or focus for a groups' attention, can be shared and passed fluidly from speaker to speaker, with little hesitation, interruption, overlap, or other potentially confusing circumstance. Because of the structural significance of turn-taking in talk, and its usual seamless choreography, when it does not go as might be expected (for instance, by involving many long pauses) then it is interesting to look at what is going on.

While CA attends to the characteristics of talk such as turn taking, it notes how these are performed in given settings and so often distinguishes between informal talk that occurs in unofficial situations, and 'institutional talk', which involves participants having some restrictions on their talk as they speak through (and thereby accomplish) institutionally-relevant roles (e.g. teacher/student) and institutionally-relevant goals (e.g. assessment) (Heritage 2005). It is this approach that we follow, since the industrial design concept reviews are explicitly intended to critique student work with the goal to help students improve that work. In taking this CA-oriented approach we are building on previous discussions of design that have adopted a fine-grained consideration of the talk that occurs during practice, for example, studies that look at: language use (Glock 2009); ethical decision-making (Lloyd 2009); the formation of design concepts (Luck 2009, 2013); rule-following (Matthews 2009); social action (Mathews & Heinemann 2012); disagreement (McDonnell 2012); and role construction and performance (Oak 2009, 2012, 2013).

3. Analysis

3.1 Institutional talk and a misunderstanding: opening the first concept review

In the first extract, which comes from the first concept review for the Graduate ID students and which features Mylie's work, we see how Simon first frames the interaction as institutional talk by orienting the participants to what is to happen in the reviews before he begins his critique of Mylie's work.

Extract 1: ID-G: Concept Review - Mylie (0:07 – 1:04)^{1 2}

¹ Key for all extracts: S = Simon (Design Instructor); D = Dan, A = Alison, M = Mylie, J = Julian, E = Eva, W = Walter, An = Alexis (Students)

² The Jefferson Transcription Notation system has been used to transcribe the DTRS extracts we are using in more detail. The full notation is given in Appendix 1.

1. S: Okay so let's (.) let's just go through a few of these (.) as a class and
- 2 kind of (.) talk 'em out and (.) <then we'll go> I'm not gonna >we're
- 3 not gonna be able to take time to do everybody's < but (.) um (2.0)
- 4 throw one out that's problematic (1.4) okay either one of yours or
- 5 somebody else's (.) where it's like yeah this needs some help what can
- 6 we do about it? (2.0) no one needs any help? (5.6)
- 7 (Alexis hands sheet over towards Mylie and Simon takes it, *images M1-M3*)
- 8 S: That one (.) tree pack
- 9 Alx: °No it was for her°
- 10 S: Okay
- 11 D: I think she was just giving it back to Mylie.
- 12 (laughter of students and instructor)
- 13 S: Oh okay <hey you volunteered it>



M1 Simon and Mylie both try to take the sheet



M2 Mylie cedes to Simon



M3 Simon grasps the sheet

Figure 1. Concept Review - Mylie, images M1-M3

Several characteristics distinguish the passage in Extract 1 as institutional talk. First, Simon, as instructor and therefore in the role of institutionally-designated authority figure, self-selects to take an opening turn in which he outlines who will participate in the ensuing discussion (the 'class' but not 'everybody') and what will happen ('go through a few of these ... talk 'em out'). He also indicates that the interaction will involve assessment and guidance since he asks the students to offer up some work ('throw one out'), particularly an example that is 'problematic' and that needs 'help' and advice ('what can we do about it?'). Through his talk Simon aims to have the

students understand the activities of the review through his terms, and to move 'the event forward on that basis' (Heritage 2005; p. 104). Although his talk is informal, Simon's opening words help to define him as an authority figure whose role enables him to outline the procedures for the concept review and to inform the students of what will happen: group-based discussion and critique of student work, as initiated by the instructor.

Simon's opening talk also serves as the first part of a summons-answer turn-taking sequence (Sawchuk 2003). That is, by saying 'throw one out that's problematic' Simon is defining the kind of work he wants to discuss and thereby constraining the students to reply by handing forward a 'problematic' design. However, no drawings are handed forward, even after what are, interactionally, very long pauses of two and then over five seconds (Line 6). Eventually Alexis hands a drawing forward (Figure 1, M1). Both Mylie and Simon gesture to take the drawing (Figure 1, M2) with Mylie yielding to Simon (Figure 1, M3) who takes hold of the drawing. Clearly, Simon has interpreted Alexis's action as a reply to his request for a drawing since, in social interaction, it is reasonable to expect that a request is being followed by a response to that request (Sacks, Schegloff & Jefferson 1974; Schegloff 2007). In this case, however, a misunderstanding has occurred as Alexis's gesture is not meant to offer the drawing for critique, but instead to return the drawing to Mylie. Indeed, when watching the video, it is not clear that Alexis has understood Simon's request for students to offer forward 'problematic' work, but once she realizes that Simon has taken the drawing to critique it, she makes a small utterance of surprise (Line 9), possibly indicating that this was not her intention. Despite the unexpected situation, she does not challenge or correct Simon. It is another student, Dan, who explains the mistake by saying: 'I think she was just giving it back to Mylie' (Line 11). All the participants laugh together, indicating each member's awareness of, and their desire to mitigate, the potential embarrassment to Simon caused by his misunderstanding; a mistake that could potentially undermine his role as an authority figure (Billig 2005; Thonus 2008).

Simon admits his error (Line 13: 'Oh okay') but then immediately accounts for his part of the misunderstanding by emphatically saying: 'Hey, you volunteered it!': i.e. Alexis handed the drawing forward so it is reasonable to begin discussing it. Yet, as the group has just established and acknowledged through talk and laughter, Alexis did not actually volunteer the work. Simon's utterance, while not technically accurate, does serve to reestablish his authority by both offering a reason for his taking of the work and repairing his interpretation of the situation by noting Alexis's role in the misunderstanding (Benwell and Stokoe 2002). While it is true that Alexis did pass the work forward, and so Simon's misunderstanding is perhaps reasonable to him, as we will see, the way that Simon has performed his request for students to submit work actually strongly militates against them doing so.

3.2 Managing 'face' in the concept review

There are several features of Simon's talk that contribute to creating a scenario wherein it is unlikely that Alexis would hand Mylie's work over for critique. First, early in the opening to Mylie's review, Simon says 'let's go through a few of these' and 'we're not gonna be able to take time to do everybody's'. Such comments leave open the question of whose work should be assessed first or at all. Therefore, despite the transitionally-relevant pause after Simon's talk, it is not surprising that no students self-select to be critiqued because they would have to guess who Simon is thinking should be one of the 'few' whose work will be discussed. After no student steps forward to fill the transitionally-relevant pauses, Simon takes another turn and says 'throw one out that's problematic'. No work is submitted, so Simon self-selects to more clearly state what he wants: work that 'needs some help what can we do about it'. Again, after a long pause that is not filled by a student, Simon speaks again, asking: 'no one needs any help?'. This question is followed by another long, transitionally-relevant pause of over five seconds, yet still no students speak or submit their work.

Through Simon's talk the students may find themselves in something of an interactional double bind wherein they have some conflict over how they should respond. That is, Simon frames his request by asking only for work that is 'problematic' and that 'needs some help'. By stating these criteria for putting work forward Simon effectively, albeit unwittingly, asks the students to negatively assess their own work or that of their fellow classmates ('yours or somebody else's'). Here, the interactional conflict is that the students, in their role as students, can be rightly expected (by themselves and others) to reply to their instructor's requests; however, students can also be expected to show solidarity with each other as peers, in part by resisting their instructor's requests (Benwell and Stokoe 2002). The nature of Simon's invitation to offer only work that has problems constrains the students to respond with a negative judgment of a fellow student's design work. Such a judgment could be interpreted as a hostile or 'face-threatening act' (as noted earlier in Section 2, a face-threatening-act has the potential to damage a person's public self-image).

Generally, participants in interaction demonstrate connectedness with each other and minimize threats to each other's face. Therefore, in the concept reviews, if a student was to submit another student's work as needing 'help', that student would perform an act that could both damage the face of the student whose work was offered, and also the face of the student doing the offering (since publicly identifying a fellow-student's work as of poor quality would threaten the critic with a face-threatening disassociation from their fellow students). Further, as well as showing disaffiliation with fellow students, such an act could demonstrate a (potentially inappropriate) affiliation with the instructor, since judging another's work as problematic is an activity associated more with the role 'instructor' than the role 'student' (Benwell and Stokoe 2002). The management of role, relationship, and 'face' may seem distant from the pedagogic aspects of running a design education

review, but the social context of the review impacts what participants feel they can and cannot say and so affects the participants' experience of the specific review and, over time and through the accumulation of many such experiences, their perceptions of what may appropriately happen in design education.

3.3 Description of expert performance: self-assessment

With Mylie's work now in front of him, Simon goes on to talk about what he sees, concentrating mainly on presentational aspects of the work such as colour ('so if you grayed this out I think you would let this come forward', 1:10), his misreading of what he has seen ('So I misunderstood your concept, now I see it's a dress', 2:13), presentation technique ('throw off a perspective line there, show a corner of a room', 3:04 and 'Okay, shadow, the way that the shadow's cast on the wall tells me it's relief as opposed to full 3D', 7.02). At the end of the video segment Simon summarizes for the students his perception of what he has done in his critique of Mylie's work:

Extract 2: ID-G: Concept Review - Mylie (9:57 - 11:07)

1 S So, okay (1.8) I've tore into you enough, sorry

2 M No no no, that's gre[at

3 S [Ri::g(h)ht

4 M Should I redo the dress?

5 S Um I didn't read it as a dress I read it as a bag

(10:06 to 10:57 excised for brevity: talk consists of Simon describing the kind of dress that he recommends Mylie draw as part of her presentation drawing).

6 S Okay so I I don't wanna (.) I'll just pick on one for you and then

7 I'll pick on one from (.) who who else has one that's got some

8 troubles?

9 ((points to Mylie's sheet, *image M4*))

10 Hers had no troubles I just tore into it and found troubles

When considered closely, it is apparent that Simon's talk in the closing moments of Mylie's review sets up a level of ambiguity concerning what should happen in a design critique. That is, in Extract 2 above, on two occasions, Simon says he 'tore' into Mylie's work (Lines 1 and 8), which is a fairly aggressive term for what Mylie perceives he has done (Line 2 indicates she has not been troubled by his comments). Despite Mylie's acceptance of his critique Simon restates his role as a hostile judge through repetitively using the phrase 'pick on one' (Lines 6-7; here it appears that Simon uses 'pick on' to indicate singling someone out for criticism). Simon ends Mylie's review by saying 'Hers had no troubles I just tore into it and found troubles', thereby referencing himself as the kind of critic who is able to find problems, even where these are not self-evident.



M4 Simon says 'I just tore into it and found troubles'

Figure 2. Concept Review - Mylie, image M4

A somewhat perplexing aspect of Simon's description of his talk as 'tearing into' Mylie's work is that it does not appear to be accurate since, during the course of the concept review his comments to Mylie had not been particularly antagonistic and, as noted above, she did not seem at all upset by his comments. Why would he describe what he has said in this way? Simon's utterance can be taken as an example of an 'impression-managing self-report, where self-assessment is [part of] communicative practice' and [where] what is offered is not just a 'report on what one is doing' but also a report of 'how well one is doing' (Agne 2010, p. 307). Self-assessment in social interaction involves talking about and judging one's actions and is a delicate maneuver since it requires indicating both a level of self-effacement (i.e. it is generally not acceptable to be over-confident in talk) and also a reasonably high degree of self-esteem (i.e. that one has reached a level of achievement that supports reflection upon one's actions) (Agne 2010; Goffman 1955).

By judging his performance as a hostile critic (e.g. 'tearing into') Simon both gives an account of his actions, and also implies to the students that such actions could be followed when they perform their own acts of assessment. In this way Simon's talk helps to position the critique as a type of ritual that may involve aggressive acts of judgment, and he frames himself in relation to the students as an authority figure who can speak in ways that the students cannot (i.e. it is unlikely that a student would publically proclaim that they had 'torn' into a fellow student's work). However, given that Simon does not actually perform distinctly hostile criticism, he offers a somewhat ambiguous modeling of what to expect in a concept review, given that what students might commonly understand as being 'torn' into would likely be more aggressive than what he has actually said. In this way, Simon's words, when coupled with the realities of his performance, could be taken as indicative of the 'competing institutional values' (Agne 2010, p. 323) that underpin different possible performances of design education. That is, does a critic in a graduate-level concept review critique someone by picking on and 'tearing' into design work that apparently has 'no troubles', or does a critic deliver a more gentle discussion? Furthermore, does a class meeting that is titled a 'concept review' focus on the

presentational qualities of drawings or on the ideas that underpin the students' work?

3.4 Critique openings: managing invitations and role-based affiliations

That assessment is somewhat problematic for the participants in the concept review sessions is evident in the openings of other reviews, which we will discuss after first outlining a few relevant details of the data. The DTRS concept reviews do not include all the students' reviews and so, while we make claims for the evidence that we consider here, we recognize that the set is incomplete. For instance there are no reviews for Lynn, Alexis, Riva, Dan or Julian, although those students are present in the group during the other students' reviews, and some of these students participate in the concept reviews by acting as critics (Dan and Julian). Additionally, although it is included in the DTRS dataset, we do not consider Walter's review because it occurred as a one-on-one meeting with Simon and we are only concerned with the group critiques. The concept reviews discussed here therefore include those of Mylie, Eva, Sydney, and Alison.

After Mylie's review (discussed above), the openings for the other students (Eva, Sydney, and Alison) took on a somewhat different character since they involved critics other than only Simon. For instance, in the next concept review, Eva's work is discussed, and it is in the opening of this review (Extract 3) that Simon asks for someone else (Julian) to do the critiquing.

Extract 3: ID-G: Concept Review - Eva (0:06 – 1:58)

- 1 S: Somebody else throw one out (3.2: Eva hands drawing to Simon) ((E1))
2 Alright I've done the critiquing ((E2)) it's (0.5) whose turn?
3 (4.5) ((Simon looks around the group; E3-E5)
4 Julian? (1.0) ((Simon looks at Julian and points to sheet, E6-E7))
5 You ready to critique this one? (3.7) ((Simon makes way for Julian))
6 Right there
7 J: Hehh (smiles) I think the (.) figure is really cool
8 ((laughter))
9 S: Okay (.) it is a really cool figure.
10 J: It is a problem (0.5) because it is too cool
11 ((laughter from students, continues over Simon's next turn))
12 S: Okay (2.0) what do you think the figure's (0.5) there for?
13 J: Erm (.) to show how cool (the body) is who is gonna use it
14 S: Okay (.) it's really cool guys that have their shirt undone halfway?
15 J: Ye(h)ah (4.4) erm (1.5) that looks like (.) it looks more like a (.) (kind of
16 like it's) a poster
17 S: A what?
18 J: A poster (.) of a movie or something

19 S: Okay
 20 J: The product may be (.) may need to be (.) er (.) amplified (2.0) made er
 21 bigger so (.) so my instruction ah (.) its seems is taken away by the
 22 other (.) things (inaudible)
 23 S: She spent (.) ((points)) hours drawing that
 24 E: No I didn't ((shakes head))
 25 S: I knew that ((smiles, general laughter))
 26 E: (inaudible) ((smiles))
 27 S: Sorry (2.5) yeah that's (.) the the danger (.) of (.) when you bring
 28 somebody else's drawing in (1.5) and it's better than your drawing (1.8)
 29 it (.) ((*image E8*)) brings an instant comparison (1.5) um and that's why
 30 (.) the sort of the (.) neutralized here (.) ((points)) >I don't I don't care
 31 about that drawing I care about this drawing<

Up to this point Simon has reviewed three examples of student work and thereby demonstrated how he critiques (Simon acted as critic on the reviews of Mylie, Lynn and Alexis. We do not have videos for Lynn and Alexis but that Simon acted as sole critic was confirmed in a private communication with one of the organizers of DTRS). Simon also has self-assessed his performance of Mylie's review (i.e. 'tore' into her). At the opening of Eva's critique, Simon asks for another piece of work to discuss (Line 1: 'throw one out', image E1), but this time he deselects himself as a speaker by saying 'Alright, I've done the critiquing it's - whose turn?' (Line 2). With this comment Simon steps down from his role as critic and offers an invitation ('whose turn?', image E2) for a student to take the 'floor'. However, since no formal order of critiquing has been established, no student self-selects to claim a turn. In the following long pause Simon looks first to Mylie (image E3), who avoids his gaze, then to Alison (image E4), who continues to look at the drawing that is to be critiqued, then to Sydney (image E5), who also avoids his gaze, and finally to Julian (image E6).

After no one takes up his invitation to speak Simon, as authority figure, selects the next speaker by directly appealing to Julian (Lines 4-5: 'Julian - you ready to critique this one?', image E7). Julian accepts Simon's request and looks at the work before making a positive comment about what he sees ('it is a really cool figure'). Simon takes back the interactional floor, by agreeing with Julian's assessment but questioning him ('what do you think the figure is there for?'), which is something of a leading question, in that Simon seems to be prompting a particular answer (Chin 2007). Julian and Simon continue in this vein (Lines 12 to 19), which is oriented to describing presentational aspects of the drawing, in a manner that Simon demonstrated earlier in his critique of Mylie. Eventually Julian offers a judgment in which he outlines how the drawing could be improved (Lines 20-22: 'the product may need to be amplified').

Here Simon interjects to suggest that Julian's advice (to make the figure less prominent) will mean that Eva will have spent much time in vain ('But she spent hours doing that'). However, this is produced as an ironic statement (Bryant 2010), which Eva does not recognize initially since she refutes Simon's comment by saying: 'No I didn't'. Julian glances at Eva (at 1.33) and laughs, and Simon confirms that he was being ironic by saying: 'I knew that' (i.e. he knew that she had not spent hours doing



E1 Simon asks for a project to Critique



E2 Simon gives an open invitation for the floor



E3 Simon looks at Mylie



E4 Simon looks at Alison



E5 Simon looks at Sydney



E6 Simon looks at Julian



E7 Simon enlists Julian to critique Eva's work



E8 Simon re-takes the floor following Julian's critique

Figure 3. Concept Review - Eva, images E1-E8

the drawing). It appears that Simon, Eva and Julian (as is suggested by his glance at Eva at 1.33) all knew that Eva had adopted the image of the figure from someone else's work or, as Julian has noted earlier, from a 'poster for a movie or something' (Line 18). Simon draws attention to the problems of adding third-party material to design work and resumes his role as critic: first, with an apology that mitigates his

face-threatening-act of drawing attention to Eva's act of borrowing; then, with a warning that includes a negative assessment of Eva's work as he says: 'That's the danger of when you bring somebody else's drawing in and *it's better than your drawing* it brings an instant comparison' (emphasis added here to specify negative assessment; image E8).

In this excerpt then we have Simon inviting others to critique, offering instruction to Julian on how to critique, and then demonstrating elements of how to critique as he resumes his own role as critic. In this way Simon carries out aspects of his institutional role as authority figure, effectively maintaining the interactional floor throughout despite initially offering it to someone else. Julian manages his roles as student and designated critic by acceding to Simon's request to speak and by offering assessment and even some 'instruction' (Line 21). However, it is interesting that the element of Eva's drawing that Julian selects to talk about was not actually created by Eva. That is, Julian critiques an aspect of her work that he may find problematic (i.e. borrowing work from another source) but Julian also avoids making an explicit judgment of Eva's own work, and so sidesteps the delivery of what could be taken as a face-threatening act to Eva.

In the opening of the concept review of Sydney's work (Extract 4, below), we again see a student meeting Simon's request to assess, while also limiting the delivery of an explicitly negative judgment.

Extract 4: ID-G: Concept Review – Sydney (0:07 – 2:12)

- 1 S: Next? (5.2)
2 ((Sydney lays down her sheet for critique, S1))
3 Okay whose turn? (7.6)
4 ((Simon looks from person to person, S2-S8))
5 Walter
6 W: Huh?
7 S: You're talking (.)
8 ((points at sheet, S9)) it's your turn ((taps table))
9 W: It's my turn?
10 S: You critique it (.) what's working [(.) explain the concepts
11 W: [Yeah
12 W: Then I'll take a look ((10.7 looks at drawing))
13 Uhh (1.0) so it's uh (0.5) it's a coat it's a coat hanger (3.4) and the way
14 you use it (2.3) I think here is a (.) here is a pull up here (1.0)
15 ((points, image S10)) and then ah use it you can a just uh (.)
16 squeeze this (3.2) and then put it in through the clothes (2.2) and then (1.2)
17 and then kind of open the (1.5) this part and then you got the (2.0) the
18 whole shape
19 S: Okay

20 W: Okay (.) make sense?
 21 S: Made (.) it made (.) it it [made sense
 22 W: [Makes sense
 23 S: Okay what's good about the drawing (.) or the board (.) and what needs to
 24 be fixed?
 25 W: I think the storyboard is (.) making very good sense
 26 S: Okay
 27 S: Yeah I I I like the [storyboard (.) are the numbers necessary or not?
 28 W: [Yes
 29 W: U::h (4.0) I think it's (not that easy)
 30 S: To me they are a little bit bold (.) they I (.) I think they help to know that
 31 you start here and go [this way because it could be the other=
 32 W: [Yeah
 33 S: =way even though we usually read left to right (.) it it's (.) it helps to see
 34 this (.) the spacing is just (.) this is just a pet peeve (.) <the spacing isn't
 35 quite consistent> (.) it's matching with the drawings but (.) this is tighter
 36 and this is bigger so (.) even the the spacing up and (.) make it a little bit
 37 (.) I think smaller so that they're not so bold (.) but they are beautiful
 38 drawings (.) really nicely done

The opening of this third concept review again positions Simon as the participant whose institutionally-mandated role gives him the authority to both speak first and to select the next speaker. As in the case of Eva's review, a drawing is handed forward (S1) and Simon asks for a volunteer to critique it ('Okay whose turn?'). Again, with no formal order of turn-taking established, Simon's request is followed by a very long, transitionally-relevant pause of over seven seconds. During this pause Simon looks around the group, with his gaze shifting to Mylie (S2), Lynn (S3), Alison (S4), back to Mylie (S5) to Eva (S6), to Sydney (S7) and then, turning to look behind him, to Walter (S8). As he looks around the students avoid his gaze by looking away from him; instead they attend to the drawing that has been selected to discuss. Eventually Simon selects the next speaker, but this time he does not ask if the student is ready to critique (as he did with Julian), instead, once he has settled on Walter, Simon instructs him to speak by saying: 'Walter - you're talking' (S9). Walter utters a surprised 'Huh?' then a question ('It's my turn?') but, after Simon outlines what he expects him to talk about ('What's working - explain the concepts'), Walter accepts Simon's directive. It is notable that Simon's description of the critique he expects from Walter is framed around the design ideas that are



S1 Sydney lays down her sheet for critique



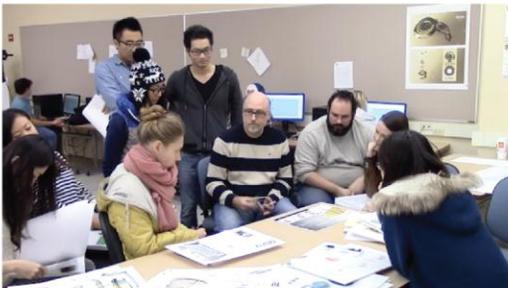
S2 Simon looks at Mylie



S3 Simon looks at Lynn



S4 Simon looks at Alison



S5 Simon looks back at Mylie



S6 Simon looks at Eva



S7 Simon looks at Sydney



S8 Simon looks at Walter



S9 Simon enlists Walter



S10 Walter starts his critique

Figure 4. Concept Review - Sydney, images S1-S10

presented ('the concepts'), rather than – as he himself has demonstrated in previous reviews – the presentational aspects of the design drawings.

Walter moves forward to look at the drawing, gesturing to it (S10) as he offers a verbal narrative of the drawing's images. After he describes how the item (a collapsible clothes hanger) works, he judges that the drawing 'makes sense'. Simon pursues Walter as the critic and asks him for a further contribution by saying: 'what's good about the drawing ... and what needs to be fixed?' This explicitly focuses attention on the drawing and thereby sidesteps questions concerning the validity or relevance of the design ideas - even though 'the concepts' were what Simon initially asked to have Walter explain. Walter avoids making a directly face-threatening, negative assessment towards a fellow student by not responding to Simon's request to state 'what needs to be fixed' about the drawing. Instead, Walter offers an upgrade of his earlier positive assessment (Heritage and Raymond 2005) by saying that the drawing/storyboard is 'making very good sense'. Simon agrees ('I like the storyboard') and then asks for Walter's opinion about the numbers on the drawing - again drawing attention to presentational rather than conceptual issues.

Walter's response is hedged as first he offers an extended 'Uhhhh', followed by a long pause, both of which indicate uncertainty and the planning of next utterances (Fox Tree 2002; Tottie 2011). Eventually Walter says 'I think it is not that easy' which implies that how the collapsible hanger would actually work is more complex than the drawing indicates. Walter thereby suggests that the drawing is not quite accurate, while avoiding a strongly negative critique of it. In this way, Walter meets Simon's request to critique while also maintaining affiliation with his classmate. After Walter's comment, Simon takes over the review (Line 30, with a discussion of how bold the drawings are), and soon offers a very positive assessment of them ('they are beautiful drawings - really nicely done'). In the context of talk within an educational institution, such unconstrained positive assessment is generally the preserve of an authority figure (Benwell and Stokoe 2002), since stating what is 'really' nice about something requires the knowledge to recognize what is good and also the confidence to publicly express this recognition in a manner that suggests others would not disagree.

The last opening that we consider is from Alison's review, Extract 5, below. Again, we have a student enrolled by Simon to assess a fellow student's work, and again we have that student managing their talk so that their affiliation with a fellow student is maintained. The first part of this concept review, Lines 1 to 21, features talk directed to some problems that Alison has with the size of presentation drawings. The participants bracket this talk off from the rest of the concept review and so this talk not analyzed in detail here, however the words have not been deleted from the transcript because they further indicate Simon's orientation to discussing the technicalities of presentation. Simon begins the review on Line 22 where he says

'Okay' ('okay', in an educational setting, indicates that a shift in conversational focus is about to occur and that others should attend to it (Schleef 2008)).

Extract 5: ID-G: Concept Review – Alison (0:06 – 1:49)

1 S: Are you sure you're up to this?
2 A: No
3 ((Alison hands over her board, *image A1*)
4 S: ha ha
5 A: I may cry
6 S: You (h) may (h) cry (.) I already made you throw away beautiful prints
7 and mounting >you know what they screwed up here () cut<
8 A: they did on alot of 'em
9 S: did you tell them that means a grade down?
10 A: I should have got a discount anyway
11 S: You should have got a discount out of that (.) take em back, say my
12 professor said (h) these were (h)=
13 A: ha ha
14 S: =unacceptable (h) and made me=
15 A: ha ha
16 S: =redo them
17 D: I want a rain check for another day
18 S: Cause I would normally (.) yeah, for a sophomore I would have put that a
19 grade down
20 A: Really?
21 S: Yeah (.) but you're not a sophomore (.) I expect more (.)
22 Okay (1.8) okay I've got a scale reference (.) so I know how big it is (.) all
23 right wait wait
24 ((taps Dan on the arm, *image A2*)
25 (.) Dan (.) your turn.
26 D: And as ((A3)) Simon so eloquently said we have a scale reference so we know
27 how big it is (.) erm (.) as we pointed out we've (.) you have the spelling
28 mistakes to fix
29 A: Yeah
30 D: So that's (inaudible) erm
31 A: ((looking at sheet)) Should that be on the bottom? (4.5)
32 Do you need the GE smaller (.) maybe it came out too big?
33 D: (2.0) Erm
34 S: Ask her why the wind is blowing ((whispered to Dan, but audible to the
35 group))
36 D: Ha heeh heh why is the wind blowing? (4.2) you trying to say
37 A: The arrow

38 D: the arrow is plus (.) er ((Crosstalk/whispering/inaudible)) (5.5)
39 The lines they're coming through the up and down or is that supposed to
40 more represent spring (2.6) the spring itself?

After Simon's 'okay' (Line 22) to indicate that the review 'proper' is about to begin (Schleef 2008) he self-selects and launches into a description of some elements of Alison's drawing (i.e. scale references). But then Simon says 'all right wait, wait': an instance of self-initiated repair to his own talk (Kitzinger 2013). Simon then turns to the student on his left and explicitly instructs him to speak by tapping him on his arm (A2) and saying: 'Dan your turn'. Unlike Julian and Walter, who indicate some



A1 Alison lays down her board for critique



A2 Simon taps Dan on the arm ("your turn")



A3 Dan takes the floor (rolls up sleeve)

Figure 5. Concept Review - Alison, images A1-A3

hesitancy to critique, Dan launches immediately into his assigned turn, with the gesture of pushing up his sleeves that suggests focusing on the business to hand (A3). However, Dan does not reply to Simon's instruction to speak by offering his own judgment of Alison's work, instead his talk includes a repetition of Simon's prior turn ('And as Simon so eloquently said we have a scale reference so we know how big it is'). Dan's subsequent talk then becomes hesitant, as he uses discourse markers such as 'erm' and pauses that indicate a disinclination to talk and that provide potential openings for others to speak (Fox Tree 2002). Eventually, this is what happens as Simon self selects and makes an audibly whispered aside to Dan, explicitly coaching him on what to say (Line 34: 'Ask her why the wind is blowing'). Dan laughs, indicating that he recognizes and shares Simon's perception that Alison's drawing depicts imagery that is unexpected and possibly questionable. Dan

then repeats Simon's question ('Why is the wind blowing?') but, since the others have heard Simon's sotto voce question, the group recognize that the source of Dan's words is actually Simon. Although Dan questions Alison's drawing (and thereby implies a negative assessment), through doing so by speaking Simon's words Dan both meets the demands of Simon (an institutionally-defined authority figure) while also avoiding the delivery of his own explicitly face-threatening criticism. By mentioning the technical and presentational aspects of the drawing (i.e. how Alison's drawing depicts the movement of the wind) rather than the ideas that underpin the design, Dan has sidestepped overt criticism of the student's conceptual acuity. Here again, and consistent with the critiques offered by Julian and Walter (though performed in a different manner), we have a student carefully managing assessment in relation to their own, and others', institutional roles.

We have seen that, consistently, students hesitate to step forward to critique and we have argued that this is at least partly because each student is disinclined to step out of their affiliative role as a classmate and into a more critical role as reviewer. However, as well as this relational double bind, their hesitancy may be exacerbated by a sort of pedagogical double bind as well. That is, Simon performs a relatively mild critical style but has described what he does as 'tearing into someone', thereby implying that critiques could be conducted in a rather aggressive way (as noted earlier in section 3.3). Such an ambiguous representation of what constitutes critiquing could contribute some uncertainty to the students' perceptions of how they should proceed. Such hesitancy of the students to critique a fellow student sees Simon stepping in to suggest specific questions to ask of the student (e.g. in the case of Simon's sotto voce comments to Dan) or indicating more generally to the critiquing student how he should proceed (e.g. in the case of Julian and Walter). In all cases, despite Simon's initial handing over of the interactional floor to specific students, Simon retakes it and thereby asserts his institutional role and his authority to manage the talk. Despite these demonstrations of interactional authority, and despite describing his critiquing style as aggressive, Simon's talk does not seem to be interpreted by the students as threatening, perhaps in part because he focuses on the technical aspects of the drawings (incorrect colour or scale, which are problems that can be changed) rather than on the conceptual ideas that underpin the students' projects.

We have studied the openings of the four group-based concept reviews in the DTRS data set and some of other instances of talk concerning the critique of the presentational aspects of the drawings. Central to our analysis is the consideration of how the institutional roles of instructor and student are oriented to by all participants in ways that have consequence for the turn-taking structure of the reviews, the manner in which relationships are performed, and the nature of assessment and how it is delivered. However, as we will now discuss prior to concluding our paper, as well as performing the institutional roles of student and instructor, participants in the concept review may also perform in ways that reference and reproduce other social roles. That is, as we watched the videos and

noted the ways in which each student was assigned their role as critic, we also noted that each student selected by Simon to critique was male and that each student critiqued was female. While several of the females are foreign students, so also are Julian and Walter, therefore Simon's judgment of the students' ability to speak fluent English does not seem to have affected his selection of critics. In the following section we consider how the selection of critics is performed in ways that indicate that participant gender is consequential to the interaction.

3.5 Gender as social role

In the DTRS data, the class of graduate students is comprised of ten students: seven females and three males, with all but Walter present for most portions of the filmed reviews that we discuss here. However, while the data indicates that all the students were in attendance as group members for (most of) the review sessions, not all the students whose work is reviewed are featured in the data. For instance, the reviews of Dan's and Julian's work are missing because they happened outside the time of recording and the reviews of Riva, Alexis, and Lynn were omitted due to problems with recording (as noted earlier, these other group-based reviews were critiqued only by Simon). Also, as noted earlier, Walter's review is included in the data but we do not analyze it here because it occurs as a one-on-one session with Simon. Thus, it is apparent that the data was not collected with attention to the gender of the participants, but it seems that the way in which the participants perform the reviews does indicate that participant gender had some impact upon the interaction. The forthcoming consideration of gender is necessarily brief, but is informed by existing literature that concerns gender's impact on social interaction (Speer and Stokoe 2011; West and Zimmerman 2009) and on university-level educational settings (van den Brink & Stobbe 2009), including those of design education (Oak 1998).

It is apparent that Simon is inclined to select males to undertake the duty of critiquing, since, despite the presence of seven females, at no point does he ask any of them to act as critics. It is also evident that the female students avoid being chosen by Simon by ensuring that they do not catch his eye as he looks around the group. Yet, as we see next in Extract 6, it is not the case that female students always avoid offering their opinions when Simon is holding the interactional floor. For instance, in the following interaction that occurs towards the end of Sydney's review, Simon has conducted most of the critique, but in so doing he is overtly challenged by Alison. In two brief turns at Lines 7 and 11 – and one of them silent – Alison asserts herself as a willing critic of Simon in a way that he and the other students notice.

Extract 6: ID-G: Concept Review – Sydney, 4:31 – 5:49)

- 1 S: So (.) now there is also conception as to conceive an idea (1.5) but you
- 2 also conceive a child (2.2) so (3.9) ((S11)) yeah (2.9) and then there is
- 3 contraception which is the (.) opposite (.) u::m ((4.0: looks at drawing))

4 Okay (2.5) O::h wow >look at her color scheme (.) how is the GE going to
5 work?< (2.3) >you're going to have to be careful you're going to have to
6 make your GE (.) probably just grey<
7 A: There's a black one.
8 S: Is there a black one? (.) a black or a grey one (.) if you put a blue one on
9 there (.) it's just going to draw our eye to it it'll be the only blue on the
10 page and it'll it'll
11 A: [[Silently points to another bit of blue on the page ((S12))
12 S: [I think it would be just (.) yeah then okay it won't be the only blue
13 you're right (2.5)
14 ((Simon and students laugh))
15 Oka::y (.) I still think it would draw a lot of attention especially if it is on
16 this black (2.3) um (.) and so (.) >okay< beautiful drawing
17 ((Hands sheet back to Eva))



S11 Simon explains 'conception'



S12 Alison points to Simon's error

Figure 6. Concept Review - Sydney, images S11-S12

Here, after a sequence of talk where Simon defines for Sydney the different meaning between the word 'conception' (as she has written on her drawing) and the word 'concept' (S11), Simon's 'Okay' at Line 4 signals that the digression is ending as he issues first a question, then a warning and then a suggestion - all concerning the presentational aspects of her drawing. Together Simon's comments amount to a somewhat negative assessment of her colour scheme (Lines 4 to 6: 'How is GE going to work - you're going to have to be careful you're going to have to make your GE probably just grey'). Although the drawing being discussed is not hers, Alison immediately contradicts Simon's judgment that Sydney should use 'just grey' by saying 'There's a black one' (i.e. there is a GE logo that is not grey). Simon questions this but then accedes as he adds black to his original recommendation of grey (Line 8: 'a black or a grey one'). Simon follows this by outlining a hypothetical scenario in which he suggests a sort of informal rule for managing colour in the drawing, whereby a blue logo would draw the eye of the viewer and be distracting because 'it'll be the only blue on the page'.

Without saying a word, Alison leans forward and points with her pen to a specific part of the drawing that is blue (S12), illustrating that in Simon's scenario a blue GE logo *won't* actually be the only blue on the page. Her silent gesture is an interactional turn that is noticed by the participants: Simon explicitly acknowledges her challenge by saying 'yeah then okay it won't be the only blue, you're right', while the others, including Simon, laugh. Such laughter indicates that they all recognize Alison's challenge as correct and therefore potentially embarrassing for Simon (Billig 2005), though Simon goes on to restate his original critical judgment of what would happen if Sydney uses the colour blue ('I still think it would draw a lot of attention'), thereby accounting for his initial assessment, reasserting his authority, and regaining the floor of the interaction.

Alison's words and actions point out factual inaccuracies in Simon's talk and bring his authority into question in a manner that indicates she is able to confidently take the interactional floor. Alison has done similar acts in other parts of the DTRS data, for example, during the Design Search phase of the project in a meeting concerning the work of Mylie and Dan (1-ID-G-Dsearch-Mylie-Dan 0:00 – 0:47). In all such instances Alison's interjections are brief but somewhat disruptive to Simon's authority with respect to the group. Clearly, then, at least one female student demonstrates sufficient agency to intervene and even to make relatively unsettling comments, and so those forms of behaviour that are often associated with femininity (e.g. acquiescence and compliance) are not inevitably performed by female students in the DTRS concept reviews.

Yet, despite this when Simon is seeking volunteers to act as critics, the female students avoid coming forward. In this way, it could be said that the female students perform those aspects of the category 'female' that are associated with the socially-accepted behavior of being quiet and not asserting themselves to claim the floor in a group-based discussion (Edelsky 1981). Further, it could be said that apparently the male students 'do masculinity', when asked to do so by Simon, that is, by stepping forward and taking the interactional floor. However, it is likely that the actions of the female and male students in the openings of the concept reviews are less associated with the overt performance of gender and more to do with their performance of 'being students' (Benwell and Stokoe 2002). That is, both the females and the males avoid offering a critique of a fellow student's work, with the males only speaking after being explicitly directed to do so, and it is likely that a female student would speak if commanded to do so by Simon. Therefore, it is less the behaviour of the students that suggests a meaningful orientation to participant gender is occurring, and more through Simon's actions with regard to his choice of critics.

Yet, although Simon only invites male students to critique, it is unlikely that he believes they are significantly more competent students or designers than the females (particularly as Simon offers several positive assessments of the work of the females). So what is going on? Here, again, the concept of 'face' may be effectively drawn upon. As noted earlier (Section 2), an important element of face management

is the degree of social distance that participants in talk believe exists between them (i.e. how related or separated participants think they are to each other) (Arundale 2010). We have seen how students, who are alike in their institutional role as students demonstrate solidarity in the presence of Simon, by minimizing the face-threatening critiques they deliver to each other. Here, Simon himself may be seeking solidarity (i.e. an agreement to do as he asks) through making requests of those students who are most like him in their social role as 'male'. Given that Simon and the male students are more alike simply through sharing the gender category 'male', it is likely that Simon feels less constrained to impose upon them and invite them to do something they apparently do not want to do (i.e. none of the students volunteers to critique).

During the concept reviews, it is the unconscious management of face, rather than some overt gender discrimination, that appears to have an impact on who is selected to speak. However, despite the participants' not recognizing, acknowledging, or otherwise consciously orienting to the gendered nature of the critique openings, Simon's selection of the category 'males' from the larger category 'students' does have implications for the structure, management and interpretation of what is going on in the concept reviews (Speer and Stokoe 2011) and so is worth noting here. That is, because Simon selects only males his choices set up a pattern of activity that has procedural consequences for these interactions, in that the reviews unfold as social situations wherein males, but not females, are institutionally authorized to judge the work of others. Despite such circumstances resulting from unconscious actions and the participants' moment-by-moment engagement in the face-saving politeness rituals of everyday social interaction, nevertheless if such markedly gendered behaviour consistently occurs across other situations in design education, then the students' experience of their professional training could reinforce and also reproduce the general social perception that the role of a product designer is a masculine preserve.

4. Conclusions: Implications and contributions

Learning to judge design work is an important part of design education, particularly of graduate-level design education. For instance, the significance of learning how to critique is noted by the UK's Quality Assurance Agency for Higher Education whose benchmarks for graduate level architectural education include the "ability to evaluate evidence, arguments, and assumptions in order to make and present sound judgments within a structured discourse relating to architectural culture, theory and design" (QAA 2010, p. 9). Achieving such a benchmark could reasonably also apply to graduate level education in product design, therefore reflecting upon how critical acuity is developed and performed may contribute to understanding, and perhaps also questioning, aspects of design education and design practice more broadly. That is, as this paper demonstrates, during a critique, the institutional context, the associated roles of participants (e.g. student and instructor), and the management of face, all contribute to shaping what can be said and how it is said.

Additionally, other forms of social role, such as gender, may also have an impact: perhaps not on what is said, but more evidently here, on who is selected to speak.

We suggest recognizing the power of the institutional context and the impact it can have on the ways in which students are likely to assess each other and their own work. Accordingly, a recommendation is that, if an instructor wants students to learn to critique it might be effective to have them start off by judging work other than that of their fellow students. Additionally, it would be helpful if instructors and students discuss what should take place in critiques: when is it appropriate to discuss concepts and ideas, and when is it more suitable to discuss type size and the colour of a logo? We are not suggesting that critiques follow a rigid topic order and procedural formality, we are, however suggesting that instructors and students seek to define what they mean by work that is 'problematic' or that has 'troubles', and thereby open up a dialogue concerning the terms by which work is evaluated. Further, we advocate for instructors and students to become more self-consciously reflective on the behaviours that constitute design education and professional practice; for instance, through considering how social roles that exist beyond the setting of design education, such as gender, may nevertheless impact upon its everyday practices, such as concept reviews. By creating opportunities for students and instructors to reflect upon the nature of assessment and how it is implemented, participants in design education may become better equipped to recognize, debate, and also change some of the discourses in which design practice is embedded and performed.

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Appendix 1 – Jefferson Transcription Notation

- (.) A full stop inside brackets denotes a micro pause, a notable pause but of no significant length.
- (0.2) A number inside brackets denotes a timed pause. This is a pause long enough to time and subsequently show in transcription.
- [A square bracket denotes a point where overlapping speech occurs.
- > < Arrows surrounding talk like these show that the pace of the speech has quickened.
- < > Arrows in this direction show that the pace of the speech has slowed down.
- () Where there is space between brackets denotes that the words spoken here were too unclear to transcribe.
- (()) Where double brackets appear with a description inserted denotes some contextual information where no symbol of representation was available.
- Under When a word or part of a word is underlines it denotes a raise in volume or emphasis.
- ↑ When an upward arrow appears it means there is a rise in intonation.
- ↓ When a downward arrow appears it means there is a drop in intonation.
- An arrow like this denotes a particular sentence of interest to the analyst.
- CAPITALS Where capital letters appear it denotes that something was said loudly or even shouted.
- Hum(h)our When a bracketed 'h' appears it means that there was laughter within the talk.
- = The equal sign represents latched speech, a continuation of talk.
- :: Colons appear to represent elongated speech, a stretched sound.

Biographies

Arlene Oak is an Associate Professor of Material Culture & Design Studies in the Department of Human Ecology at the University of Alberta, Canada. Her research

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Peter Lloyd is Professor of Design in the School of Art, Design and Media at the University of Brighton, UK and Associate Editor for the journal *Design Studies*. His research and teaching are in the areas of design process, design ethics, and design thinking with a particular focus on language and dialogue in design.