

Expectations of Reciprocity? An Analysis of Critique in Facebook Posts by Student Designers

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Teaching design relies on critique as a component of its pedagogy. As mediated communication becomes progressively more pervasive in the learning experience of developing designers, we see a need to explore how critique manifests in these mediated spaces. This study explores how learners of design use Facebook groups to collaboratively bring about design learning via critique. Facebook group communications of graduate Human-Computer Interaction design (HCI/d) participants at a large Midwestern American university were analyzed. Data included 4558 status updates and 15273 comments from 160 students. A preliminary analysis of computer-mediated communication (CMC) in this Facebook group revealed that communication centered on quasi-professional social talk, and under this framing, informal peer critique emerged as a form of phatic, professional communication.

Seventy-four threads, out of a corpus of 4558, focused on critique, suggesting learners did not capitalize on the potential of the media. Critique threads were primarily posted in groups with larger numbers of members, reflecting the desire for a broader venue of potential critique participants employed by those who recognize the potential of the media. A participation coefficient was devised to represent the level of reciprocity, addressing both the students' participation in requesting critique through status updates, and in providing feedback to other student requests for critique. No significant relationship was found between these two participation metrics, despite the assertion by multiple students that reciprocity was, or should be, present in these online critiques. Three outliers were located in this participation matrix, and are discussed as a framing for future work in understanding informal communication around critique as a type of designerly talk.

Informal Critique; Designerly Talk; Hidden Curriculum; Facebook; Computer-Mediated Communication

Introduction

Facebook and other social network sites (SNSs) are growing in popularity, and the utility of these communication venues draw in classmates in the enactment of virtual community. Even in residential design programs, online resources are used to collect information and communicate among students—from email listservs to Twitter hashtags to more formal online communities. Participation in these informal communities is not normally credited in formal curricula, and presumably because of this, has generally been eschewed by traditional educational research. However, previous research has uncovered that the participation in these SNS is not limited to simply social interaction. Learners of design have been shown to engage in designerly talk and other forms of design learning in these spaces.¹

Based on previous work in the area of informal communication and critique in physical studio environments, this study highlights participation in design critique as mediated through a student-created and moderated set of Facebook groups that were created in parallel to a Human-Computer Interaction design (HCI/d) Master's program. We focus this study on informal communications revolving around the act of critique to better understand how participation in these informal communities of learners functions as a legitimate investment of learner time in design learning.

Review of Literature

Research in design pedagogy has not traditionally focused on the informal communication present in SNSs. Therefore, three bodies of literature inform our inquiry into how these sites may or may not function as supportive of design learning: the literature on the communication of informal critique, the notion of a hidden curriculum and critical pedagogy in design education, and the prevalent theories surrounding informal computer-mediated communication (CMC).

Informal Critique

The National Student Survey in 2007² recognized informal or peer critique as a valid type of design learning, but this form of critique has been discussed minimally in the research literature. There has been limited discussion in specific design studio contexts, including Joel in an interdisciplinary studio,³ Bowring in a landscape architecture studio,⁴ and Gray in an interaction design studio.⁵ There are also examples in the design literature of digital systems for informal or peer critique, including Conanan & Pinkard in a residential educational software design course for students,⁶ and Xu & Bailey in an online environment built for practitioners or non-academic participants.⁷

The literature is inconclusive in regard to how informal critique might be expressed in these environments, and if there are substantive differences between critique in a formal classroom context and critique carried out organically between students in an online environment. It is even less clear how critique emerges in non-designed or student-created spaces that were not explicitly selected or developed for the purpose of learning. Gray addresses some discursive structures of informal critique—how critique begins and

- 1 Colin M. Gray and Craig D. Howard, 'Designerly Talk in Non-Pedagogical Social Spaces,' *Journal of Learning Design*, (in press).
- 2 Margo Blythman, Susan Orr, and Bernadette Blair. *Critiquing the Crit.* (The Higher Education Academy, Art, Design and Media Subject Centre, 2007). Retrieved from <https://intranet.rave.ac.uk/download/attachments/121176147/LTR080107-Critprojectfinalsentreportversion2.doc?version=1&modificationDate=1321008897257> on February 14, 2012.
- 3 Sian Joel, 'Wild Networks: The Articulation of Feedback and Evaluation in a Creative Interdisciplinary Design Studio,' (Edinburgh Napier University, 2011).
- 4 Jacky Bowring, 'Increasing the Critical Mass: Emphasising Critique in Studio Teaching,' *Landscape Review* 6, no. 2 (2000): 41–52.
- 5 Colin M. Gray, 'Discursive Structures of Informal Critique in An HCI Design Studio,' in *Nordes 2013: Experiments in Design Research*. Copenhagen, Denmark/Malmö, Sweden, 2013; Colin M. Gray, 'Informal Peer Critique and the Negotiation of Habitus in a Design Studio,' in *DRS // CUMULUS 2013: 2nd International Conference for Design Education Researchers*. Oslo, Norway, 2013.
- 6 Denise M. Conanan and Nichole Pinkard. 'Students' Perceptions of Giving and Receiving Design Critiques in An Online Learning Environment,' in *European Conference on Computer-Supported Collaborative Learning (Euro-CSCL)*, 2001.
- 7 Anbang Xu and Brian Bailey, 'What Do You Think?: A Case Study of Benefit, Expectation, and Interaction in a Large Online Critique Community,' in *Proceedings of the ACM 2012 Conference on Computer Supported Cooperative Work*. CSCW '12. ACM, 2012. <http://doi.acm.org/10.1145/2145204.2145252>.

ends, what kinds of setting shifts occur to shape the discourse, and the common methods of analysis or evaluation—as carried out in physical spaces, but it is unclear whether these same structures apply equally to a CMC context.⁸

Hidden Curriculum and Critical Pedagogy

The hidden curriculum is a set of norms transferred to the students implicitly, rather than explicitly through stated curricula.⁹ This concept is relevant to this study because the informal communications may set the norms of interaction and comprise a hidden curriculum that is unknown to the instructors of design. A handful of scholars have addressed the hidden curriculum in the context of design education, but have consistently done so from the perspective of the formal classroom. Dutton and Crysler look into the hidden curriculum of studio practice and advocate a more democratic model that is not focused merely on a uni-directional transmission of knowledge from professor to student.¹⁰ Webster echoes this perspective in a broader framing, calling for more attention to the social milieu of the studio, recognizing that learning is a social event,¹¹ not a solitary one as pictured by Donald Schön.¹² Dutton explains that the hidden curriculum is focused on ‘questions concerning the ideology of knowledge, and the social practices which structure the experiences of teachers and students,’¹³ and we expand his definition to informal spaces, positing that there is a substantial component of the overall pedagogical experience as experienced by design students encapsulated in these informal spaces. The Facebook groups addressed in this study are used as an example of a student-run community contributing to the overall pedagogy.

Relevant theories of Computer-Mediated Communication

The Facebook groups we address in this study have significant differences to those studied in previous CMC research for education. Traditional research has focused on learner interaction within some form of designed instruction. These groups, however, are formed and maintained by students, and the critique threads we analyze are initiated by students and guided only by the hidden curriculum we explained above. While pedagogical CMC has been characterized as being direct and coherent as compared to informal CMC,¹⁴ we must look to other theories to predict how these groups might function to support critique learning.

Theories from the body of CMC research appear somewhat contradictory given the characteristics of these Facebook groups and the space in which they communicate. Walther’s¹⁵ theory of impersonal, interpersonal, and hyperpersonal interaction in CMC spaces would predict that requests for peer critique would first be met with impersonal responses but small interactions and norms of reciprocity would catalyze participants to be hyperpersonal, investing larger amounts of time and effort in reciprocating for comparatively lesser investments of time. These aspects of CMC have been supported by other studies.¹⁶ At the same time, other research exclusively targeting Facebook participation has supported a notion that participation is determined by a desire to increase social capital.¹⁷ In such a case, participation would not be reciprocal, but rather determined either by the social status of the interlocutor, or seemingly random, out of a desire to simply increase one’s social position via participation in the online space.

- 8 Gray, *Discursive Structures*.
- 9 Paulo Freire, *Pedagogy of the Oppressed* (New York: Continuum, 2000).
- 10 Thomas A. Dutton, ‘The Hidden Curriculum and the Design Studio: Toward a Critical Studio Pedagogy,’ in *Voices in Architectural Education: Cultural Politics and Pedagogy*, ed. Thomas A. Dutton (New York: Bergin & Garvey, 1991); C. Grieg Crysler, ‘Critical Pedagogy and Architectural Education,’ *Journal of Architectural Education*, 48, no. 4 (1995): 208–17. <http://www.jstor.org/stable/1425383>
- 11 Helena Webster, ‘Architectural Education After Schön: Cracks, Blurs, Boundaries and Beyond,’ *Journal for Education in the Built Environment* 3, no. 2 (2008): 63–74.
- 12 Donald A. Schön, *The Reflective Practitioner: How Professionals Think in Action* (New York: Basic Books, 1983).
- 13 Dutton, *Hidden Curriculum*, p. 167.
- 14 Susan C. Herring, ‘Interactional coherence in CMC,’ *Journal of Computer-Mediated Communication*, 4, no. 4 (1999): <http://jcmc.indiana.edu/vol4/issue4/herring.html>.
- 15 Joseph B. Walther, ‘Computer-mediated communication: Impersonal, interpersonal, and hyperpersonal interaction,’ *Communication Research*, 23 (1996): 3–43.
- 16 L. Crystal Jiang, Natalya N. Bazarova, and Jeffrey T. Hancock, ‘From Perception to Behavior: Disclosure Reciprocity and the Intensification of Intimacy in Computer-Mediated Communication,’ *Communication Research*, (2011): doi: 10.1177/0093650211405313
- 17 Sebastián Valenzuela, Namsu Park, and Kerk F. Kee, ‘Is There Social Capital in a Social Network Site?: Facebook Use and College Students’ Life Satisfaction, Trust, and Participation,’ *Journal of Computer-Mediated Communication*, 14, no. 4 (2009): 875–901.

In order to better understand how participation in a student-organized Facebook group functions as an aspect of the hidden curriculum, we ask two questions:

1. To which Facebook groups do learners address their requests for peer critique?
2. Is there a relationship between the amount of posts and comments related to peer critique that one contributes to the group, and the amount of comments one receives?

Method

Data Collection

We collected a corpus of all communications among students in a set of Facebook groups that has existed since 2010. These Facebook groups were created by students to support their experience in an HCI/d Master's program in interaction design.

The set of Facebook groups originally began as one group for a new cohort of students in the Master's program. This Facebook group grew over time into a comprehensive set of groups, including three cohort groups (for the 2012, 2013, and 2014 Master's cohorts), a group for all currently enrolled students ('current years'), and a group containing current students and alumni ('all years'). Faculty in the program are also members of these groups, but their participation is infrequent and not construed as 'formal' curricular communication by students.

We downloaded all status updates, comments, and associated data from these five groups through the Facebook API using a custom PHP script. This data was stored in a MySQL database for future access and reconstruction in a set of relational tables. The data addressed here represents all group interactions up to April 26th, 2013. This corpus includes: 4,558 status updates and their corresponding threads of 15,273 comments. We do not address the 5,494 'likes' on posts or comments also collected via the API.

Locating participation in critique

We began by reading full discussions in a holistic manner to sift away purely social interactions, starting with the status update and following on to the comments. We searched almost a quarter of the entire corpus (some 1000 threads) for signifiers or clues that might suggest the thread contained significant amounts of peer-to-peer critique or designerly talk.¹⁸ We broke down the threads that contained elements of critique-oriented language into various discussion types. Purely social threads were not considered for analysis. Table 1 presents a breakdown of the topics that initially dealt with critique or other aspects of study.

¹⁸ Gray and Howard, *Designerly Talk*.

Table 1: Breakdown of topics discussed on a subset of Facebook threads, with social interactions removed.

# of threads	Topic of threads
21	addressing new technologies explicitly (e.g., motion control)
8	professional development
21	relating to projects outside coursework (e.g., portfolio sites)
15	idea-related discussions (e.g., what is HCI; role of intuition or ethics)
120	recommending/posting a resource or interaction design exemplar
5	dealing with selecting courses
32	relating to other forms of talk that have a critique component
4	referencing critique about public events (e.g., HCI Connect)
228 of 1000 threads	

Remarkably, we found no requests for peer critique of worked designs created for coursework within the program. Rather, we found a number of requests for critique of designs created outside the program, either as independent for-hire work, or professional development such as resumes and personal professional websites. We reread the subset of 21 of these direct requests (primarily for professional portfolios) and collaboratively developed a set of four search terms that we reasoned would identify requests for peer critique.

We electronically searched the corpus of status updates for three terms common among direct requests for peer critique: *feedback*, *look at*, and *portfolio*. We reasoned the term *critique* would also be a possible identifier of threads that contained peer critique requests. If the concept were addressed directly the likelihood that the thread contained critique might be high. 204 status updates were located when searching for these four terms.

To then identify which of these threads actually did contain critique, we then read each of the 204 status updates and collaboratively applied the following criteria:

- Does it directly ask for critique/suggestions/feedback or help?
- Does it link to, or reference, a concrete designed artifact or idea created by the poster?
- If it references a non-digital critique, does it include requests for getting together with the explicit goal of feedback in person, or organizing such an activity around a distinct artifact or genre of artifacts (e.g., cover letters)?

Using these criteria, we identified 74 threads as requests for critique across the entire corpus of 4558 threads. These 74 threads were then used as the data for analysis in the remainder of this study.

Analysis and Results

Once we collaboratively identified threads where requests for critique occurred, we addressed the characteristics of this group of threads in relation to the entire corpus. While all groups were generally available for posting to all students (i.e., students often held membership in the all years, current years, and at least one cohort group), there was a strong tendency towards using groups with larger membership when requesting critique (Table 2). Over two-thirds of all requests for critique took place in the ‘all years’ or ‘current years’ groups, with a small portion occurring across the other three cohort groups. Not surprisingly, the critique threads generally contained more comments in the larger groups, with the exception of threads in the 2014 group, which were almost twice as long on average as compared to the other two cohort groups.

Table 2: Comparison of groups to which critique requests were posted.

Group Name	# of Critique Threads	Average # of comments (SD)
Current years	28	7.5357 (5.7909)
All years	26	7.1538 (4.4609)
2012 cohort	8	3.8750 (3.9824)
2013 cohort	3	3.3333 (2.4944)
2014 cohort	9	7.4444 (5.1232)
TOTAL	74	6.8243 (5.1527)

In addition to the location of these threads, the discourse characteristics are also important to consider. We compared characteristics of the critique threads to the entire corpus, finding that critique threads are longer and more complex in almost every metric (Table 3).

Table 3: Comparison of discourse characteristics between the critique threads and the entire corpus.

Averaged Discourse Characteristics	Critique Threads, n=74, (SD)	Entire Corpus, n=4558, (SD)
Length of status update in words	50.9324 (37.0122)	31.1404 (48.0496)
Length of comments in words	34.7515 (59.4333)	19.3485 (30.5103)
Number of interlocutors	3.8649 (2.2799)	2.2251 (2.7920)
Total number of words in thread	234.3378 (253.6336)	64.8333 (165.7053)
Character length of words	4.2632 (0.4202)	3.9528 (1.1682)

Within these critique threads, 36 distinct people made status updates and wrote at least one comment on a critique thread (example of a critique thread in Figure 1). Across all critique threads, 383 comments were posted, 158 of these by the original poster on their own status update.

Participation Coefficient

Using this data, we created a participation coefficient based on two characteristics: the average number of comments per thread generated by a student's request for critique (excluding one's own comments), and the number of comments that the student posted on other students' requests for critique. We then plotted these values as a scatter-plot, looking for any trends that might develop along these criteria (Figure 2). This data showed a Pearson's r of -0.233, a weak negative correlation with a small effect size. This correlation has a significance of 0.172.

Instigation of Informal Critiques

Based on early findings on structures of peer critique in physical settings,¹⁹ it may be helpful to look at these structures in comparison to those evident in this CMC context. These online critiques took place without the benefit of physical collocation or the accompanying paralinguistic feedback, but similar issues may emerge in starting a critique session or knowing when it is appropriate to stop giving feedback. In this study, we will focus on how these Facebook critiques emerged, and less on what kinds of feedback was generated.

Students requested critique in explicit terms, but often using softened language (e.g., asking for 'feedback' or 'comments'). The term 'critique' was also present, and when used, indicated a more rigorous form of feedback—indicated by its occasional presence alongside another descriptor, such as 'comments.' Some sample requests for critique documented in these threads include:

¹⁹ Gray, *Discursive Structures*.



Fig. 1. An example critique thread from the "All Years" group, with unique interlocutors indicated by color.

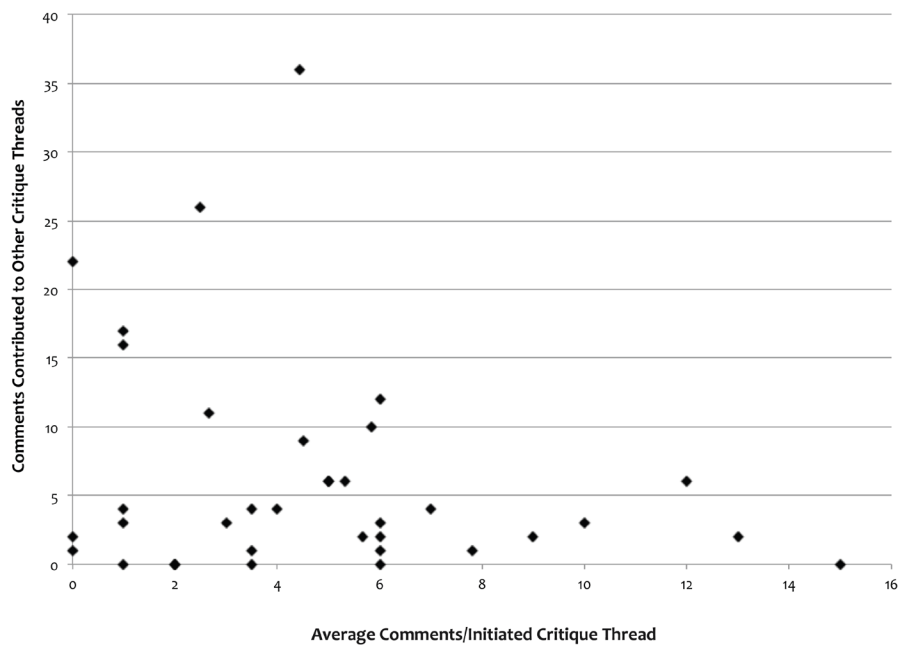


Fig. 2. Matrix of participants, positioned by the average number of comments generated by threads the student posted and the number of comments they contributed to others' threads asking for critique.

'i would love more feedback'

2014 Cohort, status update, 11 December 2012

'I really need some hard critique and bugs pointed out. Any feedback would be appreciated.'

All Years, status update, 7 November 2011

'Can anyone of you please check if you can access my portfolio URL'

2014 Cohort, status update, 22 January 2013

'I am open to any kind of comments or critique.'

2014 Cohort, status update, 6 March 2013

'Critique time, please! I still need to add more projects in my portfolio and more blog posts (all of which were on my previous portfolio), and there are some not-ideal things I need to fix too. This is my very first time using CSS. Be gentle :-)'

All Years, status update, 19 September 2012

Beyond these virtual requests for critique, references were also made to conversations in physical environments or with specific constraints for feedback. Some students requested feedback within a certain amount of time, such as these status updates indicating that time to receive feedback was limited:

'Anybody around tonight and available to critique a cover letter?'

2012 Cohort, status update, 1 February 2012

'Anybody free to quickly give feedback on a few ideas I have for my poster image? I'm wanting to get it finished and printed today...'

2012 Cohort, status update, 23 April, 2012

The imposition of structure around a request for critique also occurred, although less commonly than open-ended requests, with students asking for a specific type of feedback or a particular format with which to frame responses:

'This is still a work in progress, but I'm ready for some critiques. Please say a) something nice, b) something not nice (but in a nice way), and c) a suggestion for improvement. 1-2-3 go!'

All Years, status update, 19 January 2012

'the following is a link to our in-progress [project name] document. If anybody would like to read through it and give us feedback, that would be awesome. Even if all you can do is quickly skim it and give us one meaningful response.'

2012 Cohort, status update, 18 February 2011

'Finally worked out some bugs on the portfolio and I would appreciate any thoughts or critiques on it. If it takes a long time to load, let me know, I'm considering backing off on the one page experience if load time is an issue.'

All Years, status update, 22 January 2013

Other requests for critique included indication of a venue outside of the Facebook group, such as meeting in a physical space, sharing feedback over email, or requesting edits or comments directly in a Google Doc.

'I've posted the questions on a google doc for you to edit and make changes and suggestions. I'm getting started next week but will continue to adjust my approach throughout the project, so feel free to contribute anytime. I know everyone is very busy but any feedback is greatly appreciated.'

2012 Cohort, status update, 3 June, 2011

Although requests for critique for portfolio sites or job application materials were quite common, there was an almost complete lack of requests for class projects, and few for authentic interaction design work. Less than 10 of the 74 requests involved client work or projects outside of professional development oriented materials (e.g., cover letter, résumé, portfolio site). While additional research is needed in this area, we suggest a preliminary hypothesis that the kinds of artifacts that are created in the interaction design profession are not easily shared in the online environment, either requiring physical presence to explain, or there is not a socialized way for this kind of discussion to take place outside the classroom. While representations of design are relatively straightforward and standardized in some disciplines (e.g., blueprints for architecture, flat mockups for graphic design), there is no similar standardized intermediate artifact in interaction design that has emerged in these requests for critique.

Discussion

Targeted Groups for Critique

Seventy-four threads were identified as containing informal critique, but these threads did not appear uniformly distributed across groups. Rather, the distribution (Table 2) suggests there was a conscious recognition that a request for critique was most appropriately placed in groups with a larger audience. Both the 'current years' and 'all years' groups contained more participants than any individual cohort group, and posting in the 'all years' group (as 26 of the threads were) might have indicated a request for feedback to or from alumni of the program. Even though most students or alumni held membership in multiple groups at once, it appears that requests for critique were made strategically to attract a certain type of audience.

Lack of Relationship Between Comments Given and Received in Critique

Although we expected to find a relationship between the comments given by an individual and the amount of feedback they received when they requested critique, no such relationship existed. In fact, the weak negative correlation (Pearson's $r = -.233$) suggests a slight decline in participation on one's own requests for critique, the more you critique someone else's work. This might indicate that students bring a misconception to the process of critique and assume that those who give critique more commonly are leaders in the cohort, and thus their work may be of higher quality, and more difficult to locate

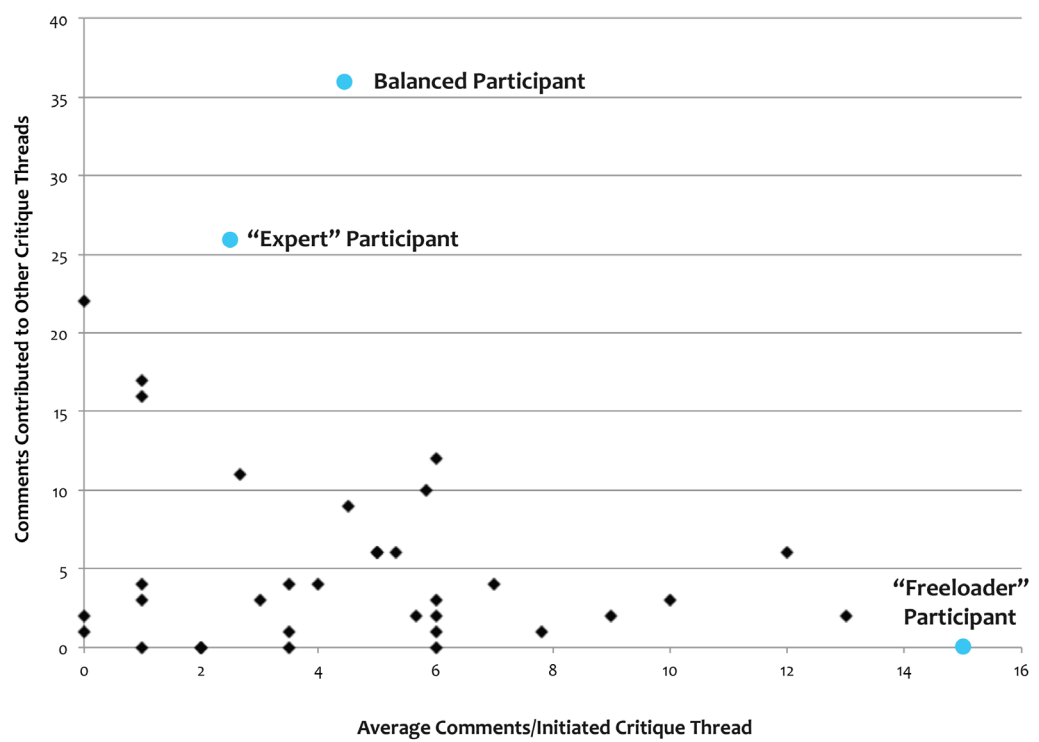


Fig. 3. Types of participants as they appear on the participation matrix.

weaknesses by less capable students. Another plausible explanation is that in this community, learners take on roles, as either one who gives critique or one who asks for it.²⁰

However, there does seem to be an expectation, at least by some students, of reciprocity within the community around informal critique. This is articulated through several requests for critique in the threads we analyzed:

'I know a lot of us are working like busy beavers on our portfolios. I could really use some critique on mine, but rather than just ask for it like a freeloader I'll make you a deal: If you give a critique of mine and post your link, I will give you a critique in return.'

All Years, status update, 20 January, 2013

'Happy to receive any feedback you guys might have; let me know if there's something of yours I can look at as well!'

All Years, status update, 22 January, 2013

'My portfolio is up, and I am jumping on the 'you critique mine ill critique your's [sic]' boat.'

All Years, status update, 22 January, 2013

While this expectation of reciprocity may have been shared by some portion of the graduate student population, 22% of the students actually did not reciprocate in critique. Eight of the 36 participants contributed either no requests or no comments at all. At the same time, a subset of equal size of students posted most of the comments (8 of the 36 students posted two-thirds of all non-self referential comments—150 out of 225 comments).

Types of Participation in Online Peer Critique

In our analysis of participation in informal critique through the participation coefficient matrix, we noticed several types of participants that may warrant future study. These types emerged as outliers in the matrix, representing wide disparities between types of participation, either due to an overall increase in comment or status update volume, or because of a discrepancy between comments received and comments provided. There are three main types we will discuss here: the 'freeloader,' the 'expert,' and a balanced, 'pay-it-forward' participant (Figure 3).

Freeloader Participant

This participant requested critique on his portfolio site in one thread, which garnered 15 comments. Five of the 36 participants requested critique but gave no comments to others' requests. He never gave back to the community in another request for critique, even though he participated in other capacities on the groups, and had explicitly mentioned the idea of reciprocity when posting his critique request ('My portfolio is up, and I am jumping on the 'you critique mine ill critique your's [sic]' boat.'). While 'freeloader' has a negative connotation, this participant may not be perceived in this way

20 Danyel Fisher, Marc Smith, and Howard T. Welser, 'You are who you talk to: Detecting roles in Usenet newsgroups,' In *Proceedings of the 39th Annual Hawaii International Conference on System Sciences*. HICSS'06. IEEE, 2006.

to his peers. From the data, he appears to have received a significant amount of feedback with no reciprocation in this space, but future study is needed to see if this type of participant balances his participation in non-virtual or non-Facebook contexts.

Expert Participant

Despite this participant's high number of contributions to others' requests for critique, **this participant's two threads only received an average of 2.5 comments each.** This relatively low amount of critique given to his work suggests to us that others may have viewed this participant as an authority, and difficult to critique. To the novice, it may appear difficult to critique or provide suggestions for improvement to more advanced designs. Even though this participant didn't receive much critique, he was an active participant on other critique threads, posting 26 comments across multiple critique threads. This type of participant is active in commenting on others' threads, not only because he is willing, but also, it seems, because others value his opinions and critique. There is a sense of professionalism and collegiality in his comments.

Balanced Participant

This participant was one of the few active female and international students on the Facebook groups in the set of critique threads we analyzed. The participation in the Facebook groups as a whole are more representative of females and international students, but relatively few of the critique threads were started by these participants. She started nine threads, each of which garnered an average of over four comments. These threads were relatively active, but she also participated heavily on other threads—contributing 36 comments on other critique threads, the most of any participant. This type of participant is the most balanced in terms of requesting and giving critique of any of the outliers we have discussed, representing the ideal of reciprocity that seems to be assumed by participants in this virtual community.

We find it curious that the balanced participant is actually an outlier to the norm. The negative correlation suggests that the psychological phenomenon of reciprocity, as well as Walther's notion of hyperpersonal interaction in CMC spaces, do not appear to apply to critique in this community. Participation was generally not rewarded with more feedback on one's own requests. Other authors have speculated that increasing social capital drives participation on Facebook, and in light of the actual discourse we discovered, we feel this provides a more plausible explanation though these methods do not afford us to identify just what that social capital investment might be.

Limitations of this Study

The methods we have employed are descriptive, and provide no evidence of why there was a lack of correlation in reciprocity. We can conjecture that the social nature of these Facebook critiques may manifest in peer critique in other environments (e.g., the studio, email, shared documents, etc.), or that participants assume roles. These methods do not support an assertion about the motivations to participate, only that it does not appear

reciprocity is happening in the space. Showing off skills, wanting to gain entrance into a subset of the community, because someone has commented on their work in the past outside the CMC space, or another reason entirely could be driving this participation.

It is also important to keep in mind that we are looking at a selected small portion of the communication that takes place. Seventy-four threads represents about 1% of the total number of threads, so we can see that the act of critiquing via the Facebook group is not one of the more common activities learners choose to undertake in the space. However, these analyses do shed light on how discourse might proceed when learners do choose to use the space for critique.

Additional research performed across digital and physical contexts may answer these questions of motivation and causation more effectively, as a more complete picture of the experience of these learners and what mechanisms they choose for communication as they exist in the 'studio bridge' between education and professional practice.

Conclusion

The literature has relatively little to offer in explaining informal interactions both in and out of the studio. This preliminary work on informal critique as it exists outside the formal curriculum seeks to extend our knowledge as an output of developing designerly behavior in this area. There is much more that needs to be studied to understand informal communication, and its affect on the overall pedagogical experience, more completely; in that framing, this study encourages future research on what *is* the student experience, not what we assume it might be for design students.

Beyond the role of these informal spaces as part of the overall pedagogical experience, there also seems to be significant learning and critical discourse in these spaces, often oriented toward future professional practice. Understanding critique within the formal studio or classroom environment is vital to the success of design education, but informal moments of critique that occur in informal spaces appear to be closer to how practitioners actually act in practice. As educators and researchers, we cannot render a full opinion on the holistic student experience of a given design pedagogy without understanding the spaces that students opportunistically build and use—often entailing a more detailed understanding of the 'hidden curriculum' of a program. In exploring these environments more critically, we find that such informal environments do not have to be built by faculty to be successful for the purposes of learning, and in fact, can have a significant impact on student success in the curriculum—both negatively and positively.

This exploratory look into a single online community also underscores the felt need on the part of students for community—both in physical and virtual spaces—and their capability and willingness to create and sustain such a community over time. While the solution is likely not to create such spaces for students (as that would make it a part of the formal curriculum), it does appear that active legitimization of these spaces on the part of program faculty, and suggesting that such spaces be built or sustained by known student leaders, may have efficacy to the pedagogy at large.