COLLABORATION IN THE DESIGN CLASSROOM

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I. THE EVOLUTION OF COLLABORATIVE CONSIDERATION: A PERSONAL JOURNEY

The evolution of my thinking on the topic of collaboration is rooted in my artistic practice as a singer/songwriter. This endeavor has usually involved recording and performing with other musicians in tandem with professional audio engineers and producers. Over time this has taught me a great deal about communication as well as about collaboration. Sociologist Howard Becker was accurate in his description of artists when he described them as working "in the center of a network of cooperating people whose work is essential to the final outcome" (Becker 1). My artistic practice, while often described as a solo venture, has always involved composing and orchestrating pieces of music to be performed by ensembles and recorded by individuals who augment the works with their stylistic approaches to the material. This musical and technical communication is thrilling to experience, and from a very young age I knew that I would make a career of it.

I began working in professional recording environments at fifteen and opened my own facility when I was twenty-two. This endeavor necessitated the development of interpersonal skills far beyond those of a traditional solo artist. Suddenly I was rounding up disparate musicians to perform ensemble pieces composed by complete strangers in as short a time frame as humanly possible. Learning to guide this process to successful fruition meant developing a better understanding of how a diverse group of people might best find common ground and work collaboratively toward a mutually satisfactory end. I experimented with several different roles over the years – from den mother, to dictator, to therapist – and found that encouraging a goal focused active conversation under the more restrained position of facilitator led to some of the most successful recordings I was ever involved in.

Contemporary music from Jazz to Punk Rock is, after all, a conversation between musicians placed into guidelines set up with agreed upon thematic concepts and roles. Each player must understand his or her role in the enterprise and visualize an overarching emotional theme, tempo, and melody in working toward a perfor-

mance. The audio engineer and producer must recognize these concepts and roles and not only facilitate them but capture them in the most transparent means possible stylistically as well as sonically. In the recording process each player struggles to express individuality while embracing the group experience. Over the next decade I was involved in the process of making hundreds of recordings with a wide variety of artists.

Eventually I became involved in other forms of media production including filmmaking, print, and interactive media design. I quickly recognized that my experiences with collaboration in music production helped me make the leap from medium to medium, and realized especially, as analog systems began to be replaced with digital production techniques, that collaborative abilities were not only a strength, but more and more often a necessity.

As my artistic practice evolved from singer/songwriter to media designer, my professional practice evolved from recording engineer to college professor; my intellectual pursuits brought me back to higher education where I continued to explore the collaborative process. This exploration was not initially a conscious decision, but rather an unnoticed thread in my practical development and exploration of technical communication and the digital arts.

In my initial graduate studies at Rensselaer Polytechnic Institute I began studying media development and usability studies and exploring the role of collaboration in technical communication and usability testing. I then moved on to Parsons the New School for Design, where collaboration was strongly integrated into the curriculum, and it was confirmed for me that groups of computer scientists, designers and artists working together are not only a common expectation in the modern work place, but a necessity in modern media development. Expertise in a variety of technologies and techniques is necessary in the design of successful web sites, video games, animations, films, and audio recordings. Here I found that, due to the complexity of these various technical skill sets, very few individuals can sufficiently cover all the necessary bases.

This resulted in the disconnect between teaching design and offering an arts degree. Many of my Parsons classmates considered themselves artists, and were grounded in a very individual centric production mindset. For them collaboration was an irritating and difficult process to come to terms with. As a result it was often very difficult to establish successful collaboration in this educational environment. Levels of expertise varied, focus and dedication differed enormously between a variety of students devoting their primary energies to unrelated thesis projects, and agreement upon final outcomes would often be overshadowed by consideration of methodology alone – an animator thinking animation to be most effective working with a programmer placing emphasis on an interesting string of code. Essentially common ground was often the last thing on any of these young designer's minds. To make matters worse, I found that the expectation of many of the professors was that we students would be able to hit the ground running when it came to team projects. While there was emphasis on the practice, there was very little attention paid to facilitating students' understanding of the collaborative process in the curriculum.

In my experience there are few activities that have positive outcomes when disparate underprepared individuals are thrown together and merely expected to perform. A truly collaborative process requires prior consideration and discus-

sion by all parties as well as deliberate attention to goals, roles, and accountability. Without these, projects often result in underwhelming outcomes and disgruntled participants.

As I began to teach as an adjunct at Parsons I worked with several of my colleagues to address this issue and prepare our students with grounded collaborative expectations and team building techniques. We began to develop syllabi that not only required collaborative work but also focused on getting the students to consider what collaboration should and could be. We developed projects and exercises that focused not only on organizational issues and methodological approaches toward a common goal, but also on developing intergroup trust and instilling a sense of responsibility in individuals.

When, several years later, the opportunity came for me to develop a design program for The City University of New York (CUNY), I built collaborative process into its very foundation. In recent years, I have been involved in developing programs in Digital Design and Animation, Music Production, and Game Design at Hostos Community College. The programs are attempting to help students aged 18 to 40, coming from a wide variety of cultural and ethnic backgrounds to successfully transition into four-year programs in the digital arts and on to careers in the field of media development.

My colleagues and I work to achieve this by approaching media design from several angles at once. We endeavor to teach stronger computer skills and software techniques, to improve students' communication skills, and to help them gain a stronger sense of aesthetic and visual form by working on real world design problems that mirror professional field experience. Many of the projects are community based/inspired, and are developed for production in cooperative studio spaces where students work together on state-of-the-art computer equipment. Our Collaborative Lab is a place where our more advanced students also volunteer their services as designers and tutors to help other students and other projects reach their maximum potential. This establishment of community within the program is essential to instilling a mentality of collaboration in the midst of vast diversity.

II. REFINING THE COLLABORATIVE INDIVIDUAL

In his writings, Peter Senge has pointed out that the traditional Industrial Age assumption of the competitive individual learning model found so often in academia is outdated and incorrect (Senge et al. 48). While competition can in some cases enhance learning, a healthy balance between collaboration and competition is a more practical model. Today's students – most of whom are members of what we call the 'Net Generation' – have become very comfortable working in teams or with a variety of peers as a result of the pervasiveness of on-line social networking such as Facebook and Ning. In their book Educating the Net Generation Diana and James Oblinger point out that the modern social dynamic now exists physically, virtually, as well as in a hybrid form of the two. Until recently, digital design carried what the Oblingers refer to as 'computer-as-box assumptions,' where the machine has been seen as a mere toolbox or as a conduit for media exposure. But modern student behavior has a perception closer to "computer-as-door, treating the device as an entrance to a social space" (Oblinger 2.12). This phenomenon of the consolidation

of social space, media outlet, and design tool is something that our programs have worked to capitalize on in developing our collaborative aspirations. While online communities can be a wonderful tool for facilitating collaboration, however, they bring with them a host of other issues.

While the awareness of the digital social network is more developed, often our students do not come to school with the abilities to utilize this awareness toward more effective group work. Instead, at the outset of their studies, they often exhibit "narrowness of viewpoint, egocentrism, ethnocentrism, and criticism of others' values, emotions, and beliefs" (Senge et al. 204). This is largely due to inexperience and/or immaturity, but it is a definite hurdle to developing a collaborative attitude. The potential for anonymity in the online social atmosphere has often reinforced these behaviors to some degree. Many of our students have been encouraged by their on-line experience to be more aware of social connections but less aware of traditional social graces under the influence of what John Suler calls the "online disinhibition effect" (Suler). Students in these virtual social networks gain a sense of removal from others in the network that allows them to exhibit behaviors such as subtle homophobia, sexism, and racism that they would be less likely to exhibit in face-to-face communication. What Suler calls the 'dissociative imagination,' the 'asynchronicity' of online communication, as well as the 'sense of invisibility' that the medium provides all can end up undermining rather than strengthening the communication afforded by online group work (Suler). Whether inappropriate communications occur in face-to-face collaboration or online, developing student awareness of the inappropriateness of this sort of behavior often requires direct intervention by our instructors. This level of involvement is necessary throughout the initial stages of collaborative process, which I believe must be taught directly and repeatedly in order to become a fundamental element in students' collaborative design practice.

At its core, design is about answering a need; addressing and solving a design problem such as creating a better hammer grip, a more effective print advertisement, or a simpler technology interface. In developing design answers it is essential that we consider the question from as many points of view as possible. Design problem solving has become more and more involved – understanding the end user, testing known precedents and prototype iterations, familiarity with developmental software and codes, communication design, and creating all the various elements that go into the answer all require a wide level of experience that is most often not found in any one individual. A group is now a necessity, and interpersonal skills are all the more important. "Listening, consensus seeking, giving up an idea to work on someone else's idea, empathy, compassion, leadership, knowing how to support group efforts, altruism," Art Costa tells us, "are all behaviors indicative of intelligent human beings" (Senge et al. 204). They are also extremely important traits of any successful modern media design team member.

III. THE COLLABORATIVE TARGET POINTS: GOALS, ROLES, & ACCOUNTABILITY

Teams experience stages in their collaborative development as the members become familiar with one another. The behaviors that Costa lists for us all come into play as teams organize around a common purpose, work through various con-

flicts that inevitably arise, and become more adept at working as a unit. One of the very first things that I do as an instructor is explain that issues should be expected and that they are a natural element in any group's development. I explain that my primary role during collaborative exercises is to be a group facilitator to help students navigate the process and I then introduce them to an organized three-phase process that will better facilitate their work.

Early on in my career as an instructor of collaborative design I established a set of points that must be clarified by any successful team. Each of these target points act as a catalyst for discussion and initiates collaborative thinking among student groups. They address the project goals, the roles of the individuals involved that will be necessary for the undertaking, and the contract of accountability of each member of the group to the rest of the team in carrying out these varied roles. Each group works to define these roles, goals, and contracts of accountability among themselves in three phases of discussion.

The Goals Phase:

The very first task in establishing an effective collaborative team is to consider what the project at hand involves. In the case of a design project that requires the establishment as a team of what the design problem actually is. What is the question? What is the need? Who is the primary testable audience? The team must then look at what approaches to the problem currently exist, analyze the strengths and shortcomings of these approaches, and from this analysis estimate criteria for success. The team then reaches some agreement as to its approach to the problem (what will their answer be?) and works to establish a system for testing the design with their success criteria in mind. Finally, it is important to draw up a timeline for the project which is as realistic as possible.

When the answers to all these questions are thoroughly considered, the task can be better described and more effective goals can be established. In her book Creative Collaboration, Vera John-Steiner writes that "there can be a more fully realized equality in roles and responsibilities in collaborative activities in which the participants see themselves engaged in a joint task" (John-Steiner 13). Therefore the foundation of the collaboration is built out of mutual understanding of the task at hand. Getting the collaborative team to estimate the problem as well as the scope of the project, and then having the team members verbalize their common goals together is crucial to establishing the following target goals of defining roles and of accepting accountability.

Through this initial phase of establishing the design problem it is of the utmost importance that the participants set the agenda in an atmosphere that encourages creative answers and feels like a safe place for expression. In the earliest stages of the goal phase there must be complete openness to ideas presented and the group must accept that any idea may be the right one. This 'no bad ideas' creative process can often be difficult for students to grasp as their egos begin to come into play. Avoiding competitive personal agendas and/or intense self-doubt at this stage of the collaborative process is essential and often requires the professor's intervention. It is the facilitator's goal to see that group members are listening to one another and that

consensus building is underway. In fact, that intervention goes on throughout the process as the professor takes on the role of facilitator rather than authority figure.

When all ideas are on the table, the team can outline design choices, choose its approach, and refine the project in order to better understand what sort of timeline will be necessary - this of course is somewhat defined by course expectations in the class environment. The team can then clarify scheduling concerns according to the timeline, establish effective communications channels, and coordinate scheduling of periodic team meetings. Once this has been completed it is time to move on to the definition of team roles.

The Roles Phase:

It is first important to define the specific roles necessary. We encourage students to sketch out on paper the myriad of actions needed to complete a project and chart them with corresponding abilities that will be needed in order to match them with skills each team member has or is developing. As with the goal phase of the project, the roles must be outlined by the entire group. This phase can often involve the usurping of a leadership role by particularly strong personalities in the team – but this is to be avoided at all costs so that consensus is found and individual participants have investment in the selections made. An assigned role is less likely to be embraced by a participant than one self-selected or volunteered for. Nevertheless, there are often less glamorous duties to be undertaken, and the facilitator encourages these to be split as equally among the group members as possible.

In order to initiate the defining of individual roles in collaborative work it is necessary to understand the skill sets that each member brings to the table. This recognition of members' potential contributions usually comes out of the initial conversations when the group first meets – "Hi, my name is Kareem, I'm a web designer" – or during the outlining of the design solution when varied opinions are introduced with the justification of technical skills or knowledge – "As a film maker, I like to observe people, and I often see people struggling with this element." Even if the team is already familiar with one another, we suggest the team take stock of the group's collective skill sets and experiences in a formal manner. Listing this out on paper assures group-wide understanding of these points.

Once initial roles have been determined, it is important to outline what the roles will involve as specifically as possible and lay out what the team's expectations of each role will be. This stage should be sketched out on paper as well, to confirm that the group is in agreement in regard to the necessary time investment.

Quite honestly, this stage is rife with issues and needs to be carefully overseen by the professor/facilitator. The first blush of enthusiasm involved in a great idea can be intoxicating to the design team, and members often suggest they can do superhuman feats in their personal contribution to the project. The closer the analysis is to true time investment necessary, the faster students will realize that they must look to one another for support in decreasing the individual work load. Only then can the group consider the skill sets of each team member, outline what will be required of each role to facilitate project goals, and then determine as a group which team members most effectively meet the individual role criteria.

When this has been drawn up and consensus has been achieved, the team must come together and agree on how each individual role will fit into the project's timeline as specified by the team. This element of role phase leads students to reflect back to the goals phase as individuals ascertain if the project timeline is still viable or if it needs to be redrawn. The roles phase also foreshadows the accountability discussion about to begin.

The Accountability Phase:

Documentation of the entire process regarding goals and roles gives a strong foundation for initiating a sense of responsibility between the various members of the team. But this responsibility needs to become a formal contract if each member of the team is to recognize their personal accountability to the project and their teammates. It is quite common for inexperienced collaboration teams to be glib about this part of the process – they see it as an obstacle to getting work started. When teams are made up of students that have been in previous collaborative groups, however, where one or more teammates may have been unable or unwilling to follow through on their responsibilities, the glibness fades and the accountability phase of the process has a more considered tone.

This phase begins with the redrawing of an outline of the project in as neat a manor as possible covering each stage of the endeavor, individual duties, and the agreed upon timeline including a schedule of group meetings. Once completed and approved by each member of the team, all individuals sign this document with the understanding that it represents an agreement of member responsibilities.

From here, the project is officially underway, and it is expected that the team carry out consistent team meetings to assess the effectiveness of their undertaking as well as the adherence to the prescribed timeline. This is important in order to successfully complete a project as outlined on time. While it is often the case at this experience level that projects imagined do not always resemble projects completed, the organic nature of collaborative design practice must rely on consensus to be an effective learning experience. Teams will often adjust their accountability document from meeting to meeting as the complex nature of the undertaking is revealed, but unless each member of the team agrees with these changes, collaboration is undermined. For this reason the accountability phase cannot be stressed enough.

IV. DEBRIEFING:

Recognition of team process in its successes as well as in its failure is the final and most important phase of the collaborative process. With each successive team project, most of my students grow to recognize the importance of adhering to the outlined phases and learn to better communicate the necessary elements of the process to one another. Our students improve in collaborative work over time and this engagement is extremely important for preparing them to be successful later in their academic experience as well as their professional careers.

I find that having the entire group fully recognize each of these three points, verbalize consensus in defining each of them, and consider how the points might come to bear on the project is essential to a team's success. If, for example, a team outlines the project goals but does not refine individual responsibilities, some

students either take on more responsibilities or avoid them altogether and the accountability of individuals gets undermined. Likewise, if the team does not fully understand what will be the end goals, they can never refine the individual roles to be played. It is essential that the three points be addressed at the outset of an undertaking, and if the projects goals or individual roles shift in the process, as long as the entire group has consensus and understanding of this, the establishment of accountability will not be undermined.

I assign a short debriefing essay at the end of collaboration exercises that asks for each student to consider their team project, its success, its failures, and reasons for both. In addition I ask them to outline for me several points that they would do differently if given the opportunity to go back to square one. This essay is designed to make students consider the process of collaboration more completely, and in successive projects, I ask that they review these previous debriefing documents in order to be more considered in subsequent endeavors.

V. FROM STUDENT TO PROFESSIONAL

In the end this entire enterprise is about influencing students to take on a more professional attitude and prepare them to transition from design students into effective and contributing members in professions where collaboration is no longer merely an approach but a necessity. Students who have worked through this phased approach several times have fewer team-based issues to contend with such as those regarding inter-team communication, individual member contribution, team-wide trust, and establishment of consensus. Project sophistication steadily improves, and in turn the level of professional attitude increases with greater and greater exposure to the collaborative process. From my vantage point as facilitator I see a palpable impact on the students themselves with an increase in acts of altruism and smoother evolution to consensus within groups.

While these young designers may wrestle with finding their individual design voices, they gain a greater awareness of the collaborative experience and how necessary it is to listen – not just to their own aesthetic sensibilities, but also to the opinions and feedback of others. This, in my mind, is the most important skill to master in design, as it builds a foundation for empathy. Design is about connecting the need of an end user or audience with a solution. Without understanding the needs and motivations of the audience in question any solutions created are ineffectual. This is to say that design is not done in a vacuum, but is always partnered with an imagined end user whose voice must be based on the designer's real understanding of an audience and its needs. Students do not become successful designers until they can learn to listen to others with as few personal filters as possible, and collaboration is perhaps the most effective tool I know of for developing this ability.

Furthermore, educating students in collaboration is a powerful way of helping them to build a bridge between the concepts of self as individual and the self as community member. Collaborative practice not only makes students into better design professionals, but also helps them to develop the ability to critically analyze what is going on in the world around them and their relationship with that world. As these students graduate and head off in pursuit of higher degrees and positions

in the collaborative world of new media, my hope is that they will take this method with them as a template for social as well as professional development.

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Lorelai Fountain, Grand Concourse. Photograph by William Casari