Transdiciplinary Research Strategies Investigating the Transition of Peer2Peer Relational Systems from Digital to Real-time Environments

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Abstract*. The paper presents research and a case study investigating a series of events developed around Peer2Peer relational systems. The events emerged as a response to the identified needs forwarded by a post-graduate research group and evolved into information networks that serve an expanded, transdisciplinary community.*

The paper begins by reviewing a discussion model which integrated Peer2Peer relational principals within the event framework as a means of expanding transdisciplinary research and practice through peer networks, and concludes by considering the opportunities Peer2Peer relational systems offer to progress future university networks.

Keywords*. Peer2Peer research; social capital; relational systems; transdisciplinary; peer networks*

The paper presents research and a case study investigating a series of research events developed around Peer2Peer relational systems. The events emerged as a response to the identified needs forwarded by a post-graduate research group and evolved into relational networks that serve an expanded, transdisciplinary community.

The paper begins by reviewing the developed discussion model which integrated Peer2Peer relational principals within the event framework as a means to expand transdisciplinary research and practice through its peer networks, and concludes by considering the opportunities Peer2Peer relational systems might offer to progress future pedagogic strategies.

case study

The study has been founded on an ongoing project, tested over the last 3 years, in which a monthly research presentation event called "drink+think" is hosted from February to November. The authors initially designed the event in response to needs identified within the post-graduate community at RMIT University Melbourne in November 2006. The event and the systems within the event were initially deployed across the Design and Social Context portfolio at RMIT University, but have since incorporated a diverse range of internationally located universities and industries, such as University of Technology, Sydney, University of Applied Science Stuttgart and Procedural Inc. Zurich. The research presentations take place on the second Wednesday of every month, and are hosted by the Design Hub gallery at RMIT University in Melbourne, and at the UrbanAid Group located at the University of Technology in Sydney.

The initial phase of the event's development sought to respond to the community's need for an informal forum that more openly engaged peer dialogue on research developing across the university. The objective was to both provide a platform showcasing work within the research community, and create an open environment that facilitated transdisciplinary exchange and collaboration. At the event's inception this manifested simply as a gathering of peers listening to presentations on collegial research; as the event further evolved the support systems within
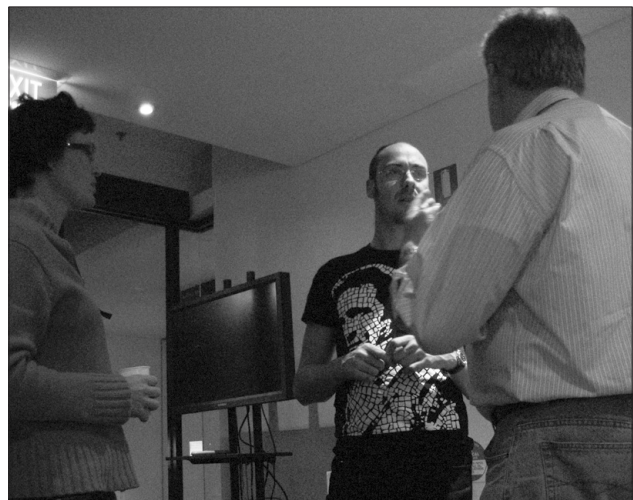

figure. 1

figure. 2

that agenda broadened to encompass a communal sharing of resources encompassing space, skill sets, or materials.

As the event, and relational systems within the event, progressed again it worked to integrate, in a more informed way, dynamics which would engage active, open dialogue and exchange across an increasingly diverse group of participants.

These propositions emerged as the audience representation grew to include disciplines as diverse as interaction design and software development, to architecture and performance. Additionally, the event was now being attended by industry practitioners not necessarily familiar with academic environments. Thus the authors sought to incorporate relational systems that would engage a common language and create an equipotent environment which facilitated active involvement for all participants.

That environment emerged largely through the event's curatorial approach which included invitations that were informal in tone, casual seating arrangements, the provision of refreshments and, most significantly, stated invitations to interrupt the speaker at any time with questions or feedback. The latter process became a critical component in fostering the openness of the exchange, triggering discussions that would extend beyond the presentation itself and maximising the opportunity for transdisciplinary exchange and collaboration.

That latter mechanism was then further synthesized within the community as it expanded through the use of video conferencing and networked systems.

In firstly examining the systems at work in the event within the context of Peer2Peer relationality the paper will explore how the inception of the event corresponds with what theorist, Michel Bauwen terms the third level of Peer2Peer emergence. Bauwen describes this as "…new ways of feeling and being, of knowing, and new constellations of values. That is the third level which occurs as a spontaneous social process, not directed, not necessarily consciously desired but part of the evolution of the `social imaginary" (Bauwen, 2004).

There are observable parallels between this statement and the social processes that emerged from changes in the "ground state" (Bauwen, 2004) of the post-graduate community. The event materialised as a response to that community's call for alternatives to pre-existing academic forums. It obliged the design of an environment which supported transdisciplinary "social capital" (Fischer. Scharff. & Ye., 2002). As a consequence the authors had to test ways which facilitated a common and equipotent environment supportive of that production. It began that initially by juxtaposing presentations from divergent disciplines with similar research inquiries. However, as the event progressed the array of relational systems required to adequately support the needs of an increasingly transdisciplinary community likewise advanced. These developments prompted what Bauwen refers to as the "fourth level"(Bauwen, 2004) of Peer2Peer emergence, in which the "producers" become "conscious of these changes, and make it an object of…intentionality. In other words, we not only see it happening…but we want it to happen" (Bauwen, 2004). The next stages of the event's development demonstrates that principle as the necessity of staging an environment that actively works to develop open dialogues and collaboration across divergent disciplines is identified and acted upon. The authors sought to manifest this by incorporating within the event's relational infrastructure key principles of Peer2Peer relations. That is, the rules of the event were informed by the needs of the community; involvement was based on assumed equipotency in which the

participants cooperate through a self-selection process that corresponds best to their expertise. The system recognized expertise but not hierarchy, and feedback was integrated within the protocol of the cooperative system (Bauwen, 2005).

It is interesting to note that these stages of development not only correspond with the levels of Peer2Peer emergence described by Bauwen, but also with the research findings presented by Gerhard Fischer, Eric Scharff and Yunwen Ye in their paper, "Fostering Social Creativity by Increasing Social Capital".

Fischer, Scharff and Ye classify the process as a "Seeding, Evolutionary Growth, Reseeding (SER) model" (Fischer. Scharff. & Ye., 2002). They describe it's initiation as a "seeding" phase which initially queries, amongst other things, who must participate and how the seed relational process balances the need of the initial developers and community. They then posit the process progresses to the evolutionary growth phase; reviewing the kinds of "extension mechanisms necessary" (Fischer. Scharff. & Ye., 2002); contributory and collaboratory motivation, and the benefits and social rewards of the system. The process then moves into a "reseeding" phase which attempts to "synthesize the incremental changes and create a new stable system upon which (further) changes can be created" (Fischer. Scharff. & Ye., 2002).

Again, examples of the SER phases can be observed through the developmental stages of the event. It firstly underwent a "seeding" phase through which it identified a community and the needs of that group, responding with the development of an alternate forum and relational systems to meet those requirements. It then moved into an "evolutionary growth phase" which reviewed and extended those mechanisms to further facilitate the community's social capital, interrogating how the systems in place might advance the contributory and collaboratory process by integrating Peer2Peer relational systems. And is currently in a "reseeding phase" through which those changes are being synthesized with video conferencing and networked systems, creating a dynamic new structure and an expanded community.

In considering the impact of these networked systems to support the "drink+think" community we have observed the following: The event employed EVO, a multi-point video-conferencing system developed by the California Institute of Technology (Caltech), to patch in speakers and audiences located both interstate and internationally; in doing so specific curatorial considerations arose with regard to maintaining the event's relational systems. In order to preserve systems which foster open dialogues between the audience and speaker(s) we were obliged to test ways that negated the sense of deferred presence that could be implicated by networked conferencing. Video conferencing systems worked effectively one on one, but became a different proposition when that dynamic became one to many. We countered that issue by projecting enlarged images of the patched-in speaker|audience against walls within the space. The clear manifestation of the speaker's physical expression in conjunction with their presentation was a significant contributing factor in the audience's engagement.

The other key issue in using video conferencing systems was interference in the stream. Problems with sound, feedback and insufficient bandwidth were common, and meant some presentations were unable to continue as planned. However, the potential these systems offer the generation of social capital is too rich to disclude from the project. Currently, we are in consultation with Professor Heinrich Schmidt, Discipline Head at the Computer Science school at RMIT, to resolve the technical issues encountered to date.

figure. 3

figure. 4

figure. 5

figure. 6

conclusion

We would like to conclude by reviewing the benefits the event's relational systems offer toward future university networks.

As stated, the event has been explicitly designed to provide platforms which showcase to the community a diverse range of research occurring across numerous universities; it provides an environment which fosters transdisciplinary exchange and collaboration, and expands localised research communities through the implementation of video conferencing systems regularly linking those communities up to an international network.

A further unanticipated but very encouraging outcome emerging directly from the event's activity has been further satellite groups developing student courses beyond the "temporal boundaries of semester-based classes" (Fischer. Scharff. & Ye., 2002). One such example is the collective, CINECITY. A voluntary group made up of architects, film and cultural theorists, interior designers and 3D animators representing a wide number of universities and practices across Melbourne, CINECITY spent 9 months developing a series of student studios and workshops which investigated how film can inform the design process, depicted in figures 3-6. The modules, held over a couple of weekends in July this year, were very well received and are now anticipated to be repeated on an annual basis.

The event's relational systems appear to enable the generation of other "social capital-sensitive environments" (Fischer. Scharff. & Ye., 2002) which produce their own independent student networks and transdiciplinary interactions; imperative exchanges as we globally face increasingly more complex design problems.

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