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5

Co-creative expertise

Distributing expertise

Co-creativity requires distributed networks of amateurs and professionals, experts and non-experts. Creativity and innovation are attributable not just to professional developers alone, but also to the distributed expertise and co-creative practices of socially networked citizen-consumers. We saw this distributed expertise at work as the *Trainz* fans brought steam locomotives to the game. This re-engineering of producer-consumer relations unsettles the paradigm of professional expertise and the associated claims to authority and control that have dominated the organization of media production throughout the industrial era (Weinberger 2007, 2011; Hartley 2009). A July 2008 report from NESTA, *The New Inventors*, acknowledges that users are changing the rules of innovation process as they increasingly participate in the development of new and improved products and services. Recognizing that user-led innovation creates significant commercial value, the report also acknowledges that this activity challenges and disrupts the boundaries and controls of traditional innovation and R&D processes.

By blurring the professional-amateur divide these transformations foreground the increasingly interdependent relationships between professional media producers and users (Jenkins 2006: 50–8; Bruns 2008: 214–19; Hartley 2009: 131–5). In the previous chapter I argued, however, that it is not all that helpful to approach these co-creative relations as necessarily involving media companies exploiting the free labour of consumers. Nevertheless, consumer participation is increasingly part of creative professionals' every day work environment. As we have seen in the case of the *Trainz* project, demanding and unruly user co-creators unsettle professional developers' work practices and routines. The very identities of professional media workers are therefore at stake in these co-creative media networks (Deuze 2007, 2009). Co-creative

relations may well disrupt the modes of cultural production that defined the broadcast era by unsettling the expertise, employment, and identities of established media and knowledge professionals.

The success of media production may increasingly rely on effectively combining and coordinating the various forms of expertise possessed by both professional media workers and creative citizen-consumers, not displacing one with the other. This requires media companies to both recognize and respect the contribution of media consumers' expertise in the context of a co-creative relationship for mutual benefit (Burgess and Green 2009b). Rather than a zero sum game in which a gain for participatory consumers is figured as a loss for professional creatives, can these co-creative dynamics be more helpfully approached as a non-zero sum game growing benefits and opportunities for all participants?

The relationship complexity of production and innovation practice is increased significantly by the arrival of this additional set of actors – consumers and users. Moreover, these additional relationships do not play out comfortably within the standard frame of hierarchical organization in a firm. Instead, they disrupt traditional industrial closed innovation systems and thereby pose significant management challenges. This requires a rethinking of how expertise works. The challenge in all of this is how do we now develop frameworks or models of expertise and knowledge production that situate the expertise of co-creative consumers in proper perspective alongside professional creatives' expertise in the fields of media production. Opening the back box of expertise should not mean a populist celebration of the overthrow of professional experts. But neither should it amount to the doom and gloom pronouncements of Andrew Keen (2007) in *The Cult of the Amateur: How Today's Internet Is Killing Our Culture*. The success of media products may increasingly rely on effectively combining and coordinating the various forms of expertise possessed by both professional creatives and creative citizen-consumers. Here it is not a situation of abandoning or displacing the expertise and jobs of professionals. As Bruns (2008: 214–19) suggests, the task is to reconcile and interrelate 'traditional expertise and emergent community knowledge structures'. This is a coordination problem in the context of dynamic and self-organizing cultural and economic networks, and as such involves transactions and exchanges across forms of expertise and knowledge that may appear to be incommensurable. I call these dynamics *co-creative expertise*.

In this chapter I draw on ethnographic research undertaken throughout 2007 with Auran to explore the co-creative relationships between professional developers and a network of gamers who provided the company with extensive play-testing feedback and creative design input. This research followed and informed Auran's online community management and social

networking strategies for *Fury*, a competitive PvP, massively multiplayer online game released in October 2007. I closely followed and observed members of Auran's online community relations team, *Fury*'s developers, and Auran senior management. I also participated in pre-release play testing of *Fury*, joining in extensive play and feedback sessions with the *Fury* gamers, as well as interviewing gamers participating in this co-creative relationship with Auran. More specifically, I consider how the design and production practice of Auran's professional developers (designers, producers, community managers, etc.), as well as their professional identities, were disrupted and unsettled by the need to negotiate with the expertise and knowledge of players. In exploring these issues I also draw on interviews I conducted with Maxis's professional developers. I discuss the diverse and often conflicting relationships and interactions between the company and the gamers that shape these emergent co-creative relationships. We've already seen, for example, that Auran's professional developers did not always wholeheartedly embrace the increasingly close relationship with the *Trainz* fans. The developers were often divided over their support for involving fans in the making of *Trainz*. While often expressing in-principle support for the idea of involving the player community, producers, lead designers and graphic artists working on the project also expressed their reservations about the risks associated with integrating the players throughout the development process. Producers, designers, programmers, artists, community relations managers, marketing managers and CEOs often have very different and at times competing assessments of the risks and opportunities of these emerging co-creative practices. They also have different understandings of how these practices should be realized.

'It's your game now'? Negotiating gamer expertise

Games scholar T. L. Taylor asks (2006a): 'What it might mean to move beyond simply managing player communities to enrolling them into the heart of design and game worlds.' Such a scenario poses expertise as a problem, as it asks us to consider extending expertise to player-consumers. It asks us to legitimate the role of players in the design decision-making process. But what does it mean to extend expertise beyond the boundaries of the firm and the craft skills of professionals to include the knowledge and skills of players?

In late 2006 Auran management approached me to provide them with consultancy advice on their relationship with an online gamer community forming around the final stages of the development and launch of *Fury*. The

project was not backed by a major games publisher and therefore did not have substantial marketing support. Auran had identified a niche opportunity in the MMOG market – hard-core, competitive PvP gamers who were somewhat dissatisfied with the current major MMOGs such as Blizzard's *World of Warcraft* and ArenaNet's *Guild Wars*. These players were interested in playing MMOG style combat games as a form of intensely competitive, team-based E-sports. Auran management believed there was an opportunity to develop a commercially successful PvP focused MMOG. Auran's CEO, Tony Hilliam, also believed that the support and endorsement of hard-core PvP gamers would be crucial for *Fury's* commercial success. As he put it to me:

We need to involve them, we need their input. It must be their game. And we've already made a start on this. We are already working with a core group of player-testers who are providing us with feedback on very early builds of the game. But we now need to expand on that and build interest and enthusiasm for the game as we ramp up to release later in 2007.

Over the final 12 months of *Fury's* development, the Auran development and community relations teams recruited a core group of experienced PvP MMOG gamers to participate in the process of testing and refining the game's design. Many of these gamers were leaders of high profile PvP guilds that were active in successful MMOG games such as *Guild Wars* and *World of Warcraft*. In the months prior to commercial launch, these expert gamers exhaustively play-tested *Fury*, dedicating many hours to providing the Auran development team with robust and critical feedback. They were not just hunting for bugs but identifying weak game features that needed updating and fixing. These amateurs forcefully and persuasively lobbied the professional developers for changes, posting extensive comments to the *Fury* forum and through direct emails to the development team. The developers made significant updates based on the consistent requests from these expert gamers. Even over the final few weeks in early October 2007 before retail launch, Auran announced further modifications to core design features based on input from these expert gamers. This co-creative exchange between the gamers and developers continued to shape and remake *Fury's* design. In pursuit of innovation and commercial success, Auran relied then not only on the creativity of internal professional developers, but also on a distributed network of expert, skilled and knowledgeable consumer co-creators operating over social networks of guilds, fan sites and other new media.

On 13 December 2007, two months after *Fury's* release, Auran Developments Pty Ltd went into voluntary administration. Some 50 staff lost their jobs in the wake of the commercial failure of *Fury* – a three year project costing \$15 million. The difficulties of successfully managing the

relationships between the professional development team and the expert gamer-testers contributed to *Fury's* failure. In a post-mortem interview with me shortly after announcing the voluntary administration, Auran's CEO, Tony Hilliam commented that the online word of mouth from these networked consumer-citizens 'has been the ultimate killer' for *Fury*. Many of the core player-testers expressed the view that *Fury* had been released too soon and the Auran developers had not gone far enough in responding to their critical feedback over the final stages of development. What went wrong and what can we learn from this?

It is important to note that I am not suggesting Auran's failure to get these co-creative relationships right was the sole factor explaining *Fury's* failure. In interviews Hilliam also commented on other problems such as: 'We literally ran out of money before the game was ready for release. We released too early, but we didn't have any choice.'

Game development projects such as *Fury* are technically challenging and high risk – many fail for a range of reasons. There was significant debate at Auran about the role and importance of these co-creative gamers' to *Fury's* success or failure. The senior producer, for example, argued that 'we maybe listened to the gamers too much and we lost our focus'. Some of the leads in the development team, while regularly expressing support for the importance of the gamer community to *Fury's* success, seemed to understand this as largely a marketing and communication function. For them player involvement should be restricted to issues such as the design of the website, gaining feedback on marketing material, identifying bugs and providing the numbers for play-test sessions to 'stress-test' the server infrastructure and systems. On crucial issues of fundamental game design they generally resisted giving too much credence to the views and opinions of the players. This was their domain as professional developers and designers. As a range of design controversies flared in the core testing community over the final crucial few months of development, Auran management struggled to manage this tension between the expertise and creative control of the professional design team and the collective intelligence of the gamer community.

After many weekends of play testing between August and late September 2007, the feedback from many of the hard-core gamers, particularly from some of the influential leading competitive guilds, indicated that wide-ranging and quite fundamental design changes were needed. The server data captured from the play sessions supported their concerns as players were committing the time to download the game client, install it, set up an avatar and play through the tutorial. But very few were then continuing to play beyond one or two matches. *Fury* was churning players rather than retaining and building a viable player base. The game environment, combat systems and interface were proving to be very daunting and unforgiving for new players. The view

was also growing among the core testers that for some reason Auran was now compromising on their original commitment to develop and deliver a PvP and E-sports focused MMOG.

On 24 September 2007 one of the testers, Aryantes, made a lengthy post to the *Fury* forum identifying a broad range of issues and factors that he argued were contributing to *Fury*'s failure to retain and grow player numbers:

One of the most important factors here is to find a way to make it fun for the new / inexperienced player. As it stands, someone who is new and being introduced to the game, will have a 0% chance against someone who even moderately knows what to do. I'm not exaggerating either . . . There's no point in competing at this point, and new players should not have to go through that, wondering why its so uneven. (Forum post, 24 September 2007)

These critical comments, however, weren't restricted to problems encountered by new or casual players. The committed and competitive guild members and leaders were noting the rather massive drop off in player numbers. On 23 September Lashiec posts:

I don't know if anyone has noticed or cares – but we've had a significant decrease in population since the last 2 patches. The game is becoming stale, and as a leader of a once quite full guild, now full of inactivity I have to wonder if we're even gonna last till next week. (Forum post, 23 September 2007)

Hades, a high-ranking player and leader of the influential guild, Lords of the Dead, (LoTD) replied, 'Yeah we've lost about 50% of our active guild due to boredom'. SexyAlf noted:

So many ridiculous changes are being made so close to release that I find less players are actually becoming addicted, and more are finding the visible flaws in the game architecture. And the vets are becoming frustrated with the constant changes. I don't think Auran follows the saying 'Don't fix what isn't broken.' Because everything is broken now and nothing works.

These posts are fairly representative of the overall feedback from players testing *Fury*. At this stage, only a matter of weeks from commercial launch, things were not looking promising for *Fury*.

Throughout this difficult period Auran's community relations managers, Alex Weekes and Dan Gray, were replying to the forum threads and to the influential guild leaders with comments that the development team were

closely monitoring the feedback and that design changes were being worked on which would fix many of the issues raised. The problem was that they had run this line for many weeks and a series of updates had thus far failed to allay the gamers' concerns. Both Gray and Weekes were employed to manage the relationship between the development team and the online community of *Fury* gamers. Identified as a high profile and respected leader of PvP guilds forming around the game *Guild Wars*, Gray was recruited because he would bring his connections with and understanding of PvP culture to the project. Much like Rob Shaw's role on the *Trainz* project, Gray was something of an embedded representative of the gamer community on the development team. Weekes had proven his ability as a community manager by establishing and running a high-profile PvP fan website and working as a community manager for NCSoft, the publisher of *Guild Wars*. Gray and Weekes worked closely with the QA team managing the players' involvement in the process of testing *Fury*. They monitored and moderated the *Fury* forums, and maintained close relationships with guild leaders, filtering their input through to the lead designers. They were also responsible for communicating the reasons for design decisions to the community of player-testers, particularly when those decisions may have been unexpected or in conflict with the wishes expressed by influential guild leaders.

The community relations team were losing confidence in the lead designer's and producer's willingness to accept the critical feedback expressed by many of the core player-testers. Gray in particular was frustrated with the leads on the design and development team. He felt they were not listening to the feedback from the core testers, and he believed that many of the leading guilds and influential players were considering abandoning the game.

In conversation with me, Gray commented:

We're on borrowed time now. We had the confidence of the players, they were really behind *Fury*. But we're rapidly losing credibility. The devs [developers] seem to think we can just keep making these posts saying we're listening and stuff. But that will get us nowhere unless the changes are actually made that these guild guys want. They're not stupid and they see through all this. They're really experienced players and know what they want from a competitive PvP game. This is what we promised them. And they're not seeing it. The devs need to deliver and we're running out of time.

In early October 2007, only three weeks before commercial release and after significant internal debate, Tony Hilliam directed that design changes needed

to be made. He drafted and released a forum post and email addressed to the core PvP gamers announcing this major direction change:

We've been receiving a lot of feedback about the state of *Fury*. We've taken some time to assess that feedback and will shortly be announcing some wide-ranging changes to *Fury*. Put simply: the community made its desires known, we've listened, and we've been convinced that changes need to happen.

The announcement briefly outlined many of the major changes that the core player-testers had been consistently requesting and included the comment,

This really is your game now [my italics], it is our task as developers to listen and react by deciding how and when to implement improvements . . . Now is the time to get your Guild-mates to come onto the forums to discuss these changes and help us make *Fury* the number 1 PvP game on the market.

The response from many in the player community was immediate, enthusiastic and generally positive. Forum threads started in which players encouraged each other to get behind Auran and promote *Fury*. On 16 October Monkey started a thread 'Pay it forward: Promote *Fury*' – 'Do you like *Fury*? Do you want it to be a huge success? The power is in your hands! If you think *Fury* is the most awesome game ever and want it to grow, all you have to do is tell 3 people how awesome it is and get them to do the same' (Forum post, 16 October 2007).

However, the gamers met Auran's eventual December release of the promised update with expressions of anger and disappointment. The development team had chosen to largely ignore the feedback from the hard-core PvP testers and taken the design in the direction of hopefully appealing to a more mainstream and casual gamer market. The problem was the design changes also failed to attract or retain new gamers in any significant numbers. *Fury* was still churning players. The design now appeared to be an incomplete compromise that had lost focus and direction. The hostility of the long-term committed testers to this update was evident in forum posts such as SkinnyG's: 'I thought this new patch was supposed to be about listening to the players but, they couldn't give a rat's ass about their players that have been here since beta. AURAN WTF IS GOING ON?' (15 December 2007). In an extended post to the *Fury* forum, respected community member and long-time *Fury* tester, Republica, criticized the Auran developers and designers for failing to make the changes that many players had been requesting. Responding to a post by *Fury*'s lead designer, Adam Carpenter, in which he

seeks to justify Auran's refusal to introduce some of the requested changes, Republica comments:

Please understand that I say this with the most heartfelt respect and compassion to you and your team: you are standing on very, very thin ice. Considering the amount of investment in this game, you need to be very careful with how you treat your players. We loved the idea, but now we're being told that the one thing we really can't stand about the game isn't going to change because you don't want to change it. And I hope you can understand that this is a bit insulting, and doesn't make it a game a lot of us will continue to play. It's also probably a huge reason behind why you're not getting better word of mouth publicity from the PvP crowd. (Forum post, 16 January 2008)

There were many forum posts made by gamers, including influential guild leaders, which expressed very similar viewpoints. These are brief example extracts from the many extensive forum posts, email exchanges and online in-game chat discussions through which these game testers provided Auran with feedback. I participated in many of these online exchanges, including extensive online and in-game chats with long-standing player-testers who expressed surprise and disappointment at what they regarded as the Auran development team's failure to take into account their feedback over the final stages of development. Of course, forum posts such as Republica's had a contested status in the Auran development team's design decisions. The lead designer and producer regularly questioned the validity of forum posts as a reliable guide to gamers' experience of *Fury*. In discussions with me, the designer argued that he could point to just as many posts offering alternative viewpoints. He commented that great care should be exercised when evaluating a game's design based on forum posts:

They're just too unreliable and all over the place. One post or thread will tell you one thing, but read on and other gamers will be arguing just as vehemently and passionately for the opposite case. We see that all the time. You cannot change a game's design based on what you're reading in the latest hot forum thread. Who would you listen to?

Auran's community relations managers on the other hand referred to Republica's forum posts as in their opinion offering a well articulated and argued perspective on *Fury's* problems. I was also referred to Republica's posts by many of the long-standing and committed *Fury* play-testers. Many of these core testers, like Republica, took Auran's invitation that 'this is your game now' seriously. They expected Auran to deliver on its commitment to

listen and to make the key changes that the players demanded. When the Auran development team failed to deliver on this commitment, the support and endorsement of these core players quickly evaporated.

In an August 2007 interview with Auran's community relation manager, Alex Weekes, I asked how seriously he thought the *Fury* developers and senior managers took integrating player feedback into their design decisions. He responded:

So far well they've been quite responsive about taking on board the feedback that we pass on to them from the players and also to a degree being involved in the community themselves which I see as a big plus. But on a few specific issues we've had a, I suppose I'd characterise it as an unwillingness to look at the deeper reasons why players were requesting specific changes . . . They [the developers] argued that this feedback was largely just coming through from very high level, elite guild players and that it might not be representative of the more casual players. But this wasn't really what we're seeing or hearing in the community, we are seeing the whole cross section sharing an opinion to a less or greater extent on these issues. It was fairly consistent feedback. But the developers, well they resisted this and discounted it for some reason. But yeah the design team seem to be continuing to take the feedback on board. It will remain to be seen exactly how they deal with the issues though.

After asking him to expand on his role as community relations manager and why he decided to accept Auran's job offer, he replied:

I decided to come to Auran and work on *Fury*, what attracted me was that I would get to work right along side the developers where the decisions are being made. It is an opportunity to have instant access to the people making those decisions and to have some influence there.

But he then also raised the concern that 'community relations' at Auran was starting to be 'just about customer acquisition and retention – a marketing and service function', rather than integrated throughout the development process.

Dan Gray, Auran's community relations assistant, became increasingly critical of the development team's reluctance to respond to the feedback from the experienced PvP gamers. In an interview with me conducted in late December 2007, he commented:

The problem was no one from design wanted to listen to us. They pretty much went forward on a gamble that they would attract new players

that would appreciate their design changes. It's kind of funny, this game started out being for the hard-core PvP gamers. That's how we were promoting it and that's the player community we went after. But when these players started criticising the design, well all of a sudden it seems we're no longer making the game for them. Maybe it was because the designers and devs didn't like hearing the criticism. The devs say the feedback coming through isn't representative of a broader casual gamer market. I've never got that and I think it is just an excuse for not listening and not making changes soon enough. All the problems that we've been running into, all the issues pointed out in the poor reviews *Fury* has been getting, they've all been pointed out repeatedly and consistently by the core PvP community. A number of people on the team now seem shocked that these problems have been raised in the reviews even though they have been raised for awhile now by the community. Now they are trying to blame it on poor marketing, saying we never got the player numbers needed to succeed in the first place. But I can tell you on a few of the test weekends we were getting decent numbers hitting the servers, they just weren't hanging around or coming back. The devs for whatever reason didn't want to listen to the feedback. This was great input from really experienced hard-core players. These guys put in a lot of time testing. Why just ignore that?

Gray's question gets us to the crux of the problem of co-creative expertise. Integrating players into the heart of the design process means extending the recognized sources of expertise beyond *Fury's* immediate professional development team to include the lead gamers, the community relations team, and a consultant ethnographer. This challenge of coordinating often competing and divergent if not incommensurable forms of expertise and knowledge practice in the design decision-making process gets us to a core dilemma of distributed expertise networks.

In a post-mortem interview in late 2007 with Adam Carpenter, *Fury's* lead designer, it became apparent that he had a very different understanding of what 'this is your game now' meant, particularly in the context of making key design decisions. When I put the community manager's question and criticisms to Carpenter and also raised with him the anger and frustration expressed by the core testers, he replied:

A couple of key things. The hardcore community generally doesn't understand how long it takes and what is required to make the changes they want. Even with a lot of our hardcore people who we assumed were advanced enough gamers to understand stuff, when we did explain combat mechanics concepts that were crucial to the design, well they

still really didn't understand it. Even though these are people with a lot of gaming experience, and we very much respect their opinion, we never got them to get outside of their own personal view and to see it from a much higher level design perspective. In terms of a lot of changes requested, even among the hardcore group, there were very diverse views. It wasn't necessarily a unified front or opinion that we were hearing. They weren't speaking with a clear enough or consistent voice for us to say 'yes this is definitely a problem' and likewise the feedback that we were getting was not necessarily from more moderate, casual gamers who were playing *Fury*. In some ways our community team could have helped us do a better job by including a more diverse range of feedback and not concentrating so much on just the hardcore.

In *The Wealth of Networks*, Yochai Benkler notes that firms' efforts to harness social peer-production challenges business with how to integrate these 'newly ambitious relationships . . . which use peer production as a critical component of its business ecology' (125). Benkler observes:

The critical and difficult point for business managers to accept is that bringing the peer-production community into the newly semi-porous boundary of the firm – taking those who used to be customers and turning them into participants in a process of co-production – changes the relationship of the firm's managers and its users. (125)

Opening *Fury's* development to this distributed network of expert gamers provided useful critical feedback and forward marketing. But it also exposed Auran to management challenges by disrupting a closed industrial model of expertise in favour of a more open innovation model. Many of Auran's senior managers failed to recognize that harnessing the support and input of these players involves an implicit recognition of the players' expert status as co-creators. Harnessing the benefits of a co-creative relationship came with a responsibility to respect that expertise, and when, in the minds of the player co-creators at least, the developers failed to do so, an implicit contract was broken and a distributed asset of innovation and development turned rapidly into a market network liability. Auran misunderstood and mishandled the context across which these interactions played out by failing to appreciate that coordinating these competing and often conflicting forms of expertise requires us to rethink how businesses and their customers form collaborative webs that extend beyond the firms boundaries. Rather than grappling with the problem and potential of fostering links throughout the organization with the core player-testers so as to encourage opportunities for the development and design teams to *innovate and create with the gamers*, Auran management

often siloed the problems raised by the core gamers as a communication and 'expectations management' issue for the marketing, customer service and community relations teams. But in saying this I am not suggesting this is an easy problem to resolve. The difficulties and dilemmas that the lead designer, Adam Carpenter, raises are real and should not be dismissed.

Addressing your consumers as co-creators invites a form of creative destruction that is disruptive and difficult to manage. The point of these lengthy quotations and observations is not to suggest that the professional designers got it wrong while the amateur gamers and community relations team were right. Valorizing consumer creativity as bottom-up dynamics of user-generated content or user-led innovation will not take us very far. This is not simply professional expertise opposed to user creativity. *Fury's* success relied on effectively *combining and coordinating* the various forms of expertise possessed by the professional developers with the gamers' expertise. But as we see in the case of *Fury*, successfully coordinating these various forms of expertise is much easier said than done. *Fury's* design team raised compelling difficulties and risks associated with integrating the gamers into the design decision-making process. These objections included the problem of assessing conflicting demands from different groups of testers and the risk of simply responding to the many requests and demands made by the gamers.

In meetings and informal discussions the community managers would refer to forum posts, emails from leading gamers, online discussions and their assessment of the 'views of the community' to support their proposals for needed design changes. I was far from a disinterested bystander in these exchanges and drawing from my research with the gamers would also contribute my assessment of the gamers' opinions. I do not claim to occupy a neutral observer status in relation to these co-creative practices forming around *Fury*. My research practice aimed to assist Auran to better understand and manage their relationship with the co-creator gamers. I worked closely with Auran's community relations team and members of the design team as they grappled with the challenges of what it meant to involve the players in the development process. I contributed to meetings, informal discussions and email exchanges in which the role and significance of the players' contribution to the design process were debated. The expertise of the ethnographer is therefore also at stake in the distributed expertise network that I'm describing. At the height of these debates in October 2007, I emailed Auran senior management with reports that drew from this research.

In 'Located accountabilities in technology production', Lucy Suchman (2000b) discusses the difficulties confronting ethnographic-based attempts to mediate relationships between IT project designer-producers and users. Discontinuities across professional traditions are grounded in assumptions about knowledge practice and production that need to be navigated. These

divisions are often difficult to negotiate, as I was finding between the Auran development teams and the community management teams. For Suchman (2000b: 3): 'A crucial assumption underwriting these persistent boundaries is the premise that technical expertise is not only a *necessary*, but is the sufficient form of knowledge for the production of new technologies.' I would add here the increasing status of design expertise. Developers and designers will not share control over technology and game design easily. As Suchman observes, the socio-material connections and working relationships that sustain these networks are often invisible in discussions of participatory culture and design. Suchman (2000b: 2) unsettles and reworks understandings of technology design and production as involving discrete objects shaped by a designer/user opposition. These oppositions close off the possibility of recognizing that networks of working relations 'including both contests and alliances . . . make technical systems possible'. Co-creativity reworks and questions these oppositions and boundaries. But 'reconstructing relations of technology production and use to acknowledge this reality is an enormously difficult task. The boundaries that currently define professional practice are realized through institutionalized arrangements crafted precisely to their reproduction' (3). Suchman argues that such a reworking requires a problematizing of the designer/user opposition, and making social relations that disrupt and cross the boundaries between them.

Across the *Trainz* and *Fury* projects we see an increasing disjuncture between the ambitions and intent of Auran management to harness player co-creative activity around their products and an oversight about the organizational remaking and transformations needed to understand and support co-creative practice. Gaps and tensions increasingly emerged across the firm about the relationship between professional design practice and players' co-creative participation. Auran's commitment to grappling with these problems cannot be disputed. Nevertheless, insufficient consideration and attention were given to reorganizing the development process and organizational structures to adequately account for the player co-creative involvement and the demands this imposed on the professional developers.

In the few days I spent at Maxis in June 2009 I encountered a company that was grappling with these challenges of coordinating the work of their professional staff with the creative output and innovations of a rapidly growing player community. Senior managers such as Lucy Bradshaw (general manager), Caryl Shaw (senior producer) and Morgan Roarity (COO) described a Maxis culture that respected and valued the input and role of the players as co-creators. In previous chapters we have seen from interview extracts their enthusiastic accounts about how the players' creativity often outpaced the ability of their team and its resources to support them. However, they also discussed the importance of embedding community managers and

producers that understood the culture of the player community throughout the development process. Morgan Roarity, for example, described the importance of regularly involving community managers such as Therese Durringer in product development discussions. I also observed that staff from community management backgrounds occupied positions as producers: Meghan McDowell (a producer who previously worked as a community manager on *The Sims* projects); Caryl Shaw (senior producer also previously worked as a community manager); and, the community manager, Therese Durringer, was also shifting into a role as an assistant producer. This ensured that the challenges of understanding and assessing the player culture was integrated in key positions across the development process rather than simply siloed as 'community relations'. I was also struck by the extent to which the Maxis staff across a range of roles were carefully thinking thorough the implications of this co-creative relationship for their identities as creative professionals. This was particularly evident in my discussion with Brian Marble, a senior tester working on the *Spore* project. Marble described how involving the players in creating the product fundamentally changes the role of testing:

Testing for this kind of game, *Spore*, with all the things players can do is not like a normal game that is linear that you can go through point-by-point checking and testing various features. Now we grab the build and need to figure out exactly how players are doing the amazing and surprising things they are coming up with. We pay attention to what the developers tell us about what's going on in the community. But we also keep an eye on the forums ourselves as well. You know in testing we have some really imaginative, creative people who can come up with all kinds of out there and even whacky ways of pushing the boundaries with what you can do with the tools. You know coming up with ridiculously complex and interesting creations. Often someone will say wow look at what the players have come up with now but we've already been there in the testing. But still what we come up with in testing doesn't even scratch the surface of what the players have now come up with. Even as creative and skilled as our team has been, we still can't catch everything the players are doing because we're not dealing here with a linear progression. This is really hard to quantify for testing purposes. For example one of my personal favourite things in *Spore* is in the creature editor. We've spent literally years of work testing that editor and thought we had everything out of there. But somehow they [the players] managed to figure out how to make the body and parts disappear. Then they've gone and written up tutorials on how to do it and that's now become one of the tools that's widely used. It's completely a bug and if we could have found that we would have fixed it. But they have worked out how to reproduce it and you really have to work

at it to make it happen but then you can come up with some really cool things. It absolutely is a bug that has become a feature [laughs].

I asked Brian to expand a little more on this changing relationship between testing and the player community:

I think the big thing is being able to be agile once the community has it and with that relationship you have with them. We've got these hundreds of thousands of people playing and exploring and you just cannot replicate that in a testing environment. You know you can duplicate some things like load testing to make sure your servers can handle the traffic and all the core functionality and features of the game. But you know you just cannot duplicate the number of minds, the number of viewpoints that your community has. You really have to be agile in responding to it and I think that as long as we care about what the community says and what the community has found we will have their support.

I asked him for a specific example of this responsiveness:

Well like with how the players are interacting with the website and how those features have worked. We thought it would work best one way and we tested it like that and it worked fine for us but when they [the players] actually used it and didn't really like it, I don't think we really quite understood, we had a lot of expectation for how the website was going to work but I don't think we really grasped how people were going to use it and how much of a social network thing it was actually going to be. We thought of it more as a resource and less as a social network and so we built it like that, we built it for people to use as a reference. But people are really using it as a social network.

I asked how that was now being addressed:

Caryl [Shaw] and the team have been reassessing all that. We've had a lot of changes with the way users interact with the website, with how the ratings system is done. We also need to look at how all that content can be searched. But it was really hard for us to test at the scale this thing has become. It has kind of caught us by surprise . . . With these open style of games such as *Spore* testing and the job of testing changes. You need to see it from the player's perspective as these open-ended things and you need to be responsive to that. It isn't just about hunting for bugs; it is also about just playing with it and trying to imagine where the players might take it.

These co-creative consumers now judge companies such as Auran and Maxis on how well they respond to their feedback and on how well they provide and deliver a service that effectively integrates the consumer across the creative development process. The positive word of mouth that Auran's CEO hoped to harness doesn't come for free. 'Attention-economy' (Lanham 2007) transactions play out here: the participation of the gamer consumers endorsing *Fury* through their fan social networks requires Auran in turn to recognize the status and contribution of the gamers' expertise in the context of a co-creative relationship for mutual benefit.

This case study of Auran's *Fury* and its complex and fraught interaction with its base of consumer co-creators raises obvious business strategy and process questions, but also some fundamental analytic questions. What are the mechanisms and processes that may help us to better understand these co-creative expertise exchanges? We need to develop analytical tools and models that help us to work through the dynamic relationships that shape these emergent co-creative exchanges. We need a framework or model of expertise that situates the expertise of citizen-consumers in proper perspective alongside professional creatives' expertise in the fields of design and media production. This problem of 'expertise extension' identified by H. M. Collins and Robert Evans (2002, 2007) acknowledges the need to extend the domain of technical decision making beyond the confines of a professionally qualified elite to include, for example, the 'experience-based expertise' of people that is not recognized by certification or professional standing. But Collins and Evans ask how do we then go about establishing grounds for limiting the extension of these decision-making rights (2002: 237)? We saw this issue of identifying the limits and boundaries of such rights in the 'design by committee' concerns raised by *Fury's* lead designer. Collins and Evans provide us with a starting point for undertaking this task by establishing the necessity of recognizing and categorizing different types of expertise. They then argue that it then becomes 'possible to begin to think about how different kinds of expertise combine in social life, and how they combine in technical decision-making' (2002: 251).

'Interactional expertise' and co-creative trading zones

In these contexts of asymmetrical co-creative expertise exchange the participants need to develop and use what Collins and Evans describe as '*interactional expertise*' (2002: 256; Collins 2004; Collins and Evans 2007). Defined as (Collins and Evans 2007a: 14) 'the ability to master the language of a specialist domain in the absence of practical competence', interactional

expertise is a translation role that facilitates and supports communication, dialogue and exchange across expertise domains. In developing this category of expertise, Collins draws on his experience as an ethnographer studying scientists researching gravitational waves. He argues that through this participatory engagement with the scientists over an extended period, he acquired competencies and communication skills that enabled him to contribute to discussions about the subject in a way that passes for expertise, although he does not possess the rigorous mathematical knowledge or core experimental skills required to participate fully in that domain of scientific research. Collins and Evans (2002, 2007) argue that this interactional expertise that often sits between and cuts across specific expertise domains is vital to the success of projects that involve collaboration across different expertise sub-groups.

Collins, Evans and Gorman (2007) have refined further this idea of interactional expertise by drawing on Peter Galison's (1997) term 'trading zone' to understand the exchanges and transactions that routinely occur in interdisciplinary scientific research across fields that may appear to be formally quite incommensurable. Galison emphasizes the need to address communication problems across these domains by developing 'in-between vocabularies' and 'inter-languages'. They identify the importance of interactional expertise to the successful development of trading zones as coordinating mechanisms. Collins, Evans and Gorman (2007: 662) assert that 'interactional expertise trading zones seem so widespread that it might be argued that it is the norm for new interdisciplinary work'.

Co-creative expertise can be understood then as a coordination or re-coordination problem that requires the use of interactional expertise to create and facilitate trading zones. But developing such interactional expertise is difficult and time consuming and project managers routinely underestimate its significance (Collins, Evans and Gorman 2007: 663–5; Collins and Evans 2007; also see Stark 2009: 192–4). In the case of *Fury* it is arguable that Auran failed to construct an effective trading zone that supported interchange and transactions across the differing skills that needed to combine to identify and solve the game's design problems. Interactional expertise is a skill that Auran undervalued to its cost.

The idea of a trading zone as a place where problems of coordination are resolved provides us with a useful starting point for understanding co-creative expertise and the problem of making co-creativity work fairly and effectively. But to develop this idea further it is necessary to acknowledge that the asymmetries and incommensurabilities shaping these co-creative trading zones will be very different from those evident in interdisciplinary science research projects. For a start co-creativity in the forms explored in this book blur relations between economic and cultural domains. Nevertheless, one

of the advantages of approaching this as a trading zone is that it helps us to avoid a static or oppositional face off between these domains and enables us to think about the dynamic relationships between them.

Co-creative expertise concerns how organizations and institutions are evolving, often disruptively and uncomfortably, in the context of these changing production and consumption relations. The significance of co-creative expertise is that it requires new ways of thinking about creativity and innovation as these processes are no longer the exclusive domain of specialist professional experts (von Hippel 2006; Hartley 2009). Innovation increasingly requires a collaborative exchange with users. Amateur and professional identities and motivations are both involved in the making of these co-creative relationships and they are not easily separated. The innovative potential and significance of co-creative culture is not just about the bottom-up practices of media consumers that disrupt the consumer-producer opposition. The more significant transformation is the dynamic and emergent relations between markets and non-markets, professionals and amateurs. Media products and platforms such as *Fury* and *Spore* are potentially sites of innovation because they are produced dynamically through the interconnected participation of *both* media professionals and consumers. What I am calling *co-creative expertise* concerns how these practices, both professional and amateur, are interacting and converging in new and disruptive ways.