A relational materialist approach to errant media systems: The case of Internet video producers

This chapter examines how a relational materialist approach to media systems can be used to theorize glitches, malfunctions and breakdowns and give due prominence to such errant behaviour alongside nominal behaviour. The approach used here draws upon the notions of 'assemblage', as formulated by Manuel DeLanda from his reading of Gilles Deleuze and Felix Guattari, and 'actor-network' from Actor-Network Theory (ANT) and applies them to case studies of three groups of video makers. These concepts provide a rich theoretical language with which to frame and analyse important aspects of the different arrangements of people and machines these groups created to distribute their work on the Internet, such as their complexity, precariousness and heterogeneity. The case study groups are visionOntv, the Internet video project of the UK activist group Undercurrents; an international group of film and television fans; and the California Community Media Exchange, an association of US community media centres located in Northern California. The criteria for selecting these particular groups were part of the requirements of a larger study, from which the dataset for this chapter derives: The groups needed to belong to categories of non-professional producers that existed before the advent of the Internet but that later adopted it to distribute videos and the groups also needed to be active during the time of the study.

These groups were studied ethnographically over two distinct periods: May 2011 to June 2012 and November 2016 to November 2017. Initial entry into the field was framed by the literature on participatory culture but while investigating this many informants would

complain in passing about the errant behaviour of the different technologies they used to distribute their videos, such as disruptions caused by denial of service attacks on LiveJournal, unwarranted YouTube takedown notices generated by bots and problems with how Facebook's algorithms filtered posts. While initially dismissed as irrelevant to the research, it eventually became clear that these complaints were instead important clues to understanding the nature of the processes the groups were engaging in as they formed and tried to maintain their distribution systems.

The first section of this chapter provides a brief overview of the notions of assemblages and actor-networks. This section will also discuss the compatibility of these two concepts and how they, when taken together, provide complementary insights. The second section will then apply this theoretical framework to case studies of the three groups examining how their media systems and the errant behaviour they experienced can be framed and analysed in the language of assemblages/actor-networks. The chapter concludes with some observations concerning how this approach can provide a comprehensive analysis of errant behaviour by placing it within its wider socio-technical context.

The ethnographic fieldwork that underpins this chapter involved observing and participating with the groups online and offline, usually on a daily basis. The data collected was triangulated against 85 formal interviews.[1] My identity and the nature of the research were disclosed fully to all informants directly in these online and offline spaces.

Relational materialism: Assemblages and actor-networks

Drawing upon Deleuze and Guattari's notion of assemblage, DeLanda develops a social ontology based on the concept of relations of exteriority, where wholes are comprised of parts that are autonomous from them, and where the properties of a whole are synthetic, emerging from the interactions of the capacities of those parts with each other, and not merely an aggregation of the component parts' properties (DeLanda 2006b: 9-11). Deleuze characterizes these interactions between component parts as 'alliances' and 'liaisons' that result in them having a symbiotic relationship with each other (Deleuze and Parnet 2006: 52).

DeLanda (2016: 10–11) illustrates how an assemblage's properties can emerge from the interaction of its component parts through a discussion of interpersonal relationships within tight-knit communities. For such communities the degree their members are connected together govern the pervasiveness of information throughout the community relating to, for example, transgressions of norms by a member, which will become part of the transgressors reputation if it is remembered by enough members. This property of 'density' (of connections) is a quality of the assemblage that emerges with a sufficient quantity of connections: Communities with too few connections will not be able to transmit knowledge of, punish (through ostracism or ridicule), or remember such violations (DeLanda 2016: 76). The emergent property of density is a property of the assemblage as a whole, relying on the interaction of its components and not simply an aggregate of those components' properties, while at the same time not requiring that we think of an assemblage 'as a seamless totality in which the very personal identity of the members is created by their relations: neighbours can pack their things and move to a different community while keeping their identity intact' (DeLanda 2016: 12).

In addition to emergent properties and relations of exteriority, there are two other defining aspects of an assemblage for DeLanda that are relevant here. The first 'defines variable processes in which these components become involved and that either stabilize the identity of an assemblage, by increasing its degree of internal homogeneity or the degree of sharpness of its [spatial] boundaries, or destabilize it. The former are referred to as processes of territorialization and the latter as processes of deterritorialization … which either destabilizes spatial boundaries or increases internal heterogeneity' (DeLanda 2006b: 12-13). DeLanda provides an illustration of territorialization processes through an examination of the US computer manufacturing industry where the 'integrating and regulating activities of organizations such as trade and industry associations are a key component of these processes'. For example, 'industry associations are instrumental in leading their members towards consensus on many normative questions which affect them collectively, particularly the setting of industry-wide technological standards' thereby acting to homogenize the industry (DeLanda 2006b: 82). The industry however is also subject to deterritorialization processes since it operates in a 'turbulent environment … created by a high rate of innovation in products or processes', which increase the industry's heterogeneity due to the differing rates the various manufacturing organizations adapt to these changes (DeLanda 2006b: 82). The final defining aspect of an assemblage discussed here is the role played by language in stabilizing its identity through the process of 'coding' and its destabilization through 'decoding'. For example, 'in institutional organizations … the legitimacy of an authority structure is in most cases related to linguistically coded rituals and regulations … written rules, standard procedures, and most importantly, a constitutional charter defining its rights and obligations' (DeLanda 2010: 13).

For DeLanda, then, 'the identity of any assemblage at any level of scale is always the product of a process (territorialization and, in some cases, coding) and it is always precarious, since other processes (deterritorialization and decoding) can destabilize it' (2006b: 28). DeLanda's reference to scale here points to how his understanding of the notions of components and assemblages are relative. Illustrating this using the computer industry example above, while the industry can be considered an assemblage and the individual organizations that make it up as components, those organizations are also themselves assemblages (of, for example, people, buildings and machines). When referring to these assemblages of assemblages DeLanda uses the term 'macro assemblage' with their component assemblages referred to as 'micro assemblages', but these designations are to be understood strictly as relative: That is, for DeLanda, a micro assemblage can be a macro assemblage when considered at a lower level of scale and vice versa when considered at a higher level (2006a: 251-2, 2010: 68).

Having completed our brief sketch of assemblages we now turn to actor-networks. To understand this concept we first need to address its key terms as their definition within the theory deviates somewhat from common parlance. With respect to the first term, 'an entity counts as an actor if it makes a perceptible difference. Active entities are relationally linked with one another in webs. They make a difference to each other … they enact each other' (Law and Mol 2008: 58). Also, as Latour states, 'the word actor has been open to … misunderstanding … "Actor" in the Anglo-Saxon tradition is always a human intentional individual actor' but in ANT, contrary to this, an actor is 'something that acts or to which activity is granted by others. It implies no special motivation of human individual actors, nor of humans in general. An actant can literally be anything provided it is granted to be the

source of an action' (Latour 1998: Section 3. As with this quote of Latour's, the term 'actant' is sometimes used as a synonym for 'actor' by ANT scholars).

Law and Mol's use of the term 'web' above anticipates the meaning of the term 'network' within ANT, which sees 'everything in the social and natural worlds as a continuously generated effect of the webs of relations within which they are located' (Law 2009: 141). As this quote hints at, and as Latour (1999a: 15, in Gane 2004: 83) emphasizes, 'network' within ANT is not to be understood as a system that transports things without deformation, like a telephone network, but rather as a series of translations. These translation processes, which are sometimes also referred to as transformations or transductions, are described in various ways within the ANT literature. Callon (1980: 211), for example, states that 'translation involves creating convergences … by relating things that were previously different … [it is] the expression of a shared desire to arrive at the same result'. Sometimes achieving this can require negotiations or 'trials of strength' to achieve an alignment of interests when competing actors 'problematize' the situation in conflicting ways (Callon 1986: 203–211). The 'new interpretations of … interests' achieved by a successful translation process can result in 'channelling people in different directions' (Latour 1987: 117). Elsewhere, Latour defines 'translation' as 'a relation that … induces two mediators into coexisting' (2005: 108), where mediators are defined as actors that 'transform, translate, distort, and modify the meaning or the elements they are supposed to carry' (2005: 39). An actor-network can therefore be understood as the web (network) of associations created by mediators (actors) and are the 'flows of translations' (Latour 2005: 132) created by the work of these mediators as they enact, enable, and adapt to each other (Mol 2010: 260). The inclusion of a new actor within an actor-network as a result of a successful translation is referred to as 'enrolment' (for example, Callon and Law 1982).

On rare occasions, according to Latour, mediators can become intermediaries, where the latter transport 'meaning or force without transformation: defining its inputs is enough to define its outputs' (2005: 39, 40, 105). This applies both to single actors and to actor-networks: 'If a network acts as a single block, then it disappears, to be replaced by the action itself and the seemingly simple author of that action … A working television, a well-managed bank or a healthy body … mask the networks that produce [them]' (Law 1992: 385). That is, the complexity and specificity of the actor-network need not be engaged with and it can be simply treated as an actor within other actor-networks, which is referred to as 'blackboxing' within ANT (Callon 1991: 153, Latour 1999b: 304, Law 1992: 385).

From the various formulations of the concept of translation above, we can see that the process requires work: 'What is important in the word network is the word work. You need work in order to make the connection' (Latour in Gane 2004: 83). Also, once the connections are made they are not permanent, but rather require ongoing work to maintain the enrolment of the different actors: 'A network is not made of nylon thread, words or any durable substance but is the trace left behind by some moving agent … it has to be traced anew by the passage of another vehicle, another circulating entity' (Latour 2005: 132). As Law puts it, 'building and maintaining networks is an uphill battle … enrolment is precarious … links and nodes in the network do not last all by themselves but instead need constant maintenance work, the support of other links and nodes' (2003: 3). Sometimes, however, in spite of this maintenance work, actors can cease to perform their roles within an actor-network resulting in it coming apart.

We can see from this section that assemblages and actor-networks are very similar concepts as they are both precarious arrangements of interacting humans and non-human objects, which are separable from these arrangements, that are more than the sum of their

parts. This close relationship is attested to by a number of scholars (for example, Acuto and Curtis 2014: 5, Harman 2007: 3, 2014: 124, Law 2009: 146). In a similar vein to works that treat these two approaches as either complementary or use their terminology interchangeably (for example, Bennett 2005, Müller and Schurr 2016, Rizzo 2015, Salovaara 2015), the case studies below will be analysed by drawing upon the theoretical vocabulary of both assemblages and actor-networks. This will allow for a richer and more faithful rendering of the situations encountered in the field than relying upon one approach alone. For example, with respect to processes of stabilization, the ANT vocabulary of problematization, interests, translation and enrolment provides a way to break down these processes into different stages and elements, while the concepts of territorialization and coding from DeLanda's theory of assemblages draws our attention to the role space, diversity of components and language play in them. For the sake of convenience and clarity, the term 'assemblage' will be used to refer to both DeLanda's assemblages and to actor-networks throughout the case studies.

Precarious media assemblages

This section analyses the errant behaviour of the media systems used by each of the three case study groups by framing it within a socio-technical analysis of those systems using the approach outlined above, beginning with visionOntv. VisionOntv was run by a core team of two people supported by a pool of volunteers and its primary goal was to promote the development of communities of social change through attracting audiences for the activist and alternative videos that it produced and distributed via the Internet and by facilitating

conversations within these audiences. To achieve this goal visionOntv constructed a complex media system: At its core was the Liferay content management system. Liferay was used to both organized the thousands of videos that visionOntv distributed and to provide tools for their audiences to discuss them through comment boxes and other text-based functionality such as a bulletin board, a wiki and chat. While Liferay enabled visionOntv to organize their content thematically into 'channels' it did not have the functionality to aggregate videos. This was done instead through the open source software platform Miro Community, which was embedded within each of the Liferay channel webpages. Miro Community only provided aggregation functionality however, and did not host the videos themselves, and so visionOntv used video hosting platforms such as YouTube and Blip and then linked them to Miro Community via RSS feeds. VisionOntv's media system also used social media platforms such as Facebook and Twitter to feed audiences into the Liferay channels.

Typically for assemblages, as we saw in the previous section, the processes for enrolling this heterogeneous collection of human and machine components into visionOntv's media system required work and the results were precarious. For example, adapting RSS technologies to visionOntv's needs took several attempts by volunteer programmers. The work involved in this 'enrolment' process (Callon and Law 1982) not only concerned manipulating these technologies so Miro Community and the hosting platforms could 'coexist' (Latour 2005: 108), but also involved the negotiations involved in 'translating the interests' (Callon 1986: 203–211) of the volunteers who had their own motivations and objectives concerning the work they were doing that diverged from visionOntv's core team to some degree. Even after a component's enrolment has been completed however, it remains precarious and requires work to maintain (Law 2003: 3), and so it was with the RSS

feed: A glitch developed in the feed from Blip to Miro Community which meant that general entertainment videos unrelated to visionOntv's goals were being fed to one of visionOntv's channels. The cause of this, visionOntv believed, were changes Blip's engineers had made to their hosting platform, which was a process that made Blip's enrolment within visionOntv's assemblage fail as it required visionOntv to take the feed offline while searching for a way to enrol it again. We can see therefore that while the complexity of the Blip-RSS 'micro' assemblage (sitting within the visionOntv 'macro' assemblage; DeLanda 2006a: 251-2) could be ignored and treated simply as a 'black box' (Latour 1999b: 185, Law 1992: 385) or 'intermediary' (Latour 2005: 39) when it was acting nominally, its specific nature and complexities had to be engaged with when it stopped acting as required so the situation could be rectified. This overall situation can also be understood in terms of DeLanda's (2006b: 28) observation that an assemblage's identity is the product of a process but is precarious since it can be destabilized by other processes: In this case, the identity of visionOntv's assemblage as an activist project was primarily formed by the processes that circulated activist videos through it but the appearance of unrelated videos threatened to destabilize its identity via a 'deterritorialization' process, as the malfunctioning feed introduced heterogeneity into the assemblage, and it required a 'territorialization' counter process of removing that feed to increase the homogeneity of the videos within the assemblage to stabilize its identity (DeLanda 2006b: 12).

Another example of components in visionOntv's assemblage not functioning as required involved the audience interaction functionality within Liferay: There was very little audience discussion on the channels despite the traffic they received, which visionOntv believed was caused largely by the lack of user-friendliness of the text-based tools on that platform. To remedy this situation, visionOntv attempted to upgrade Liferay to a version

that included the 'OpenSocial' framework, which contained social media tools that they believed were more suited to facilitating conversations amongst their audience members. However, despite several attempts, visionOntv were unable to complete the upgrade successfully. While this situation could simply be regarded as an isolated instance of user error or a technical glitch, the upgrade process can also be understood more broadly as one of the many translation processes that visionOntv attempted while constructing and maintaining their media assemblage: During the upgrade attempts visionOntv had contacted Liferay's technical support team for assistance, however they were using a free version of Liferay which did not come with support. VisionOntv were therefore not able to obtain the assistance they required, despite some negotiations, but they were not prepared to pay a licence fee that would enable them to get this support due to their limited budget and their commitment to developing a free to use media system as a template for other video activists to adopt. This was therefore a failed translation process as visionOntv were unable to change the Liferay organization's problematization (Callon 1986: 203–211) of its platform and were in turn unable to accept this problematization themselves, preventing an alignment of their interests.

A final example of the errant behaviour of visionOntv's media assemblage concerns Facebook, which they used to enrol audiences into Liferay: When a new video was available, a post was made on visionOntv's Facebook page that contained a link to the relevant channel on Liferay, rather than an embedded video or a link to the video's hosting service, so as to direct the audience to Liferay and away from Facebook and the hosting service. They did this because they believed that their platform was a more suitable place for the kinds of conversations they were trying to facilitate to occur, in spite of the perceived inadequacy of its current set of communication tools.

Their Facebook posts were actants that enrolled audiences into the Liferay platform through a translation process that involved 'channelling people in different directions' (Latour 1987: 117), namely away from Facebook and into Liferay for those interested enough in the post to click on the link. This process was however prone to failure and one reason for this was that many of the people who 'liked' visionOntv's Facebook page were not receiving their posts. VisionOntv believed that this had always been an issue for them although they also believed that the situation had deteriorated significantly between the two periods of fieldwork and that this was due to changes in how Facebook's traffic algorithms worked. In fact, the Facebook organization had admitted that the way their algorithms handled the general increase in traffic on their social media platform over the period in question had indeed led to individual posts reaching fewer people than they had previously (Boland 2014). The algorithms' response to this increase in traffic resulted in the users' enrolments within visionOntv's assemblage destabilizing, as they required the regular passage of 'circulating entities' to be maintained (Latour 2005: 132). Facebook did provide a new actor, in the form of paid functionality that made posts appear in news feeds of more users, to help maintain these enrolments but VisionOntv were unwilling to pay for this due to their limited funds and their anti-capitalist philosophy, which contributed to a decline in the number of views their videos were receiving.

Turning now to the second case study, the group of film and television fan video makers discussed here traced its roots to the mid-1970s and had a predominately female membership who hailed primarily from North America and Western Europe. For a majority of the fieldwork the group was centred around the LiveJournal online journaling platform and two annual fan video conventions. While the group did not go by a particular name, it will be referred to here as the LiveJournal vidding community.

Before the adoption of LiveJournal, which began in the early 2000s, the group had relied upon email lists and bulletin boards as its main modes of online communication concerning videos. LiveJournal eventually replaced these older technologies to become the central component of the group's assemblage and some of the perceived advantages that had prompted its adoption over these technologies also helped to stabilize the group. One example of this concerned the email lists where group members felt that long posts or frequent posting was discourteous as it risked inundating other members. Live Journal on the other hand provided each group member with their own online space where they could post as much and as often as they desired without disturbing others since only those interested in reading what they had to say would visit their pages. LiveJournal allowed these visitors to leave comments on posts, and also to leave comments on comments, which sometimes led to conversations developing between different group members. These posts and comments were actants that enrolled one community member's account into another's and were therefore one of the community assemblage's stabilization processes: When a post or comment interested group members enough to leave a comment this process would link the accounts together since not only did LiveJournal's system automatically include a link in the comment to the commenter's account but it also sent a message to the original poster's LiveJournal inbox containing a link to the commenter's account. The greater freedom the members felt LiveJournal gave them to express themselves led to an increase in the number and length of conversations occurring within the community which in turn increased the 'density of connections' (DeLanda 2016: 10) between the different members to such a degree that it became an emergent property of the community assemblage that helped to stabilize it.

While communications between members on LiveJournal typically worked to stabilize the community assemblage, it was precarious and miscommunications between them could also destabilize it. One way this manifested was when comments made concerning a video that were intended as constructive criticism were interpreted negatively by other members leading to conflicts that could break the connections made between them thereby threatening to destabilize the group assemblage. To maintain the community assemblage's stability its online conversations had become increasingly 'coded' (DeLanda 2010: 13) over time through discouraging constructive criticism and the posting of controversial material. In addition to miscommunications, other errant processes related to LiveJournal threatened the community's stability. For example, LiveJournal's administrators at one point had purged a large number of accounts from their platform that included keywords relating to sexual offenses, however this purge had also erroneously included some innocent accounts such as fan pages relating to films and television programmes that addressed these themes. Another source of instability related to LiveJournal concerned denial-of-service attacks it suffered periodically, which some in the community believed were a consequence of its use by Russian political dissidents. Therefore, while LiveJournal was an actant within the community's macro assemblage that could mostly be engaged with as a dutiful intermediary, it was also a micro assemblage that underwent its own processes that sometimes brought its specificity as an assemblage of people and machines to the fore in such a way that destabilized its enrolment within the macro assemblage: In these two cases, a territorialization process performed by its staff, possibly assisted by bots or algorithms, to homogenize its accounts by excluding those it considered unacceptable and also a deterritorialization process conducted by third-parties that temporarily excluded the community from LiveJournal's online space.

The vidding community did not host their videos on LiveJournal but would rather host them on third party platforms and typically embedded the videos from these platforms within the LiveJournal post announcing them. Embedding was a translation processes that made LiveJournal and the hosting platform intelligible to each other through the use of (software) code. This translation was precarious however, as it was subject to a deterritorialization process: It depended on the specifics of the platforms involved but, as with DeLanda's (2006b: 82) computer industry example, rapid technological change could alter the specifications related to embedding functionality potentially introducing heterogeneity as different organizations adapted to these changes at different rates. The vidding community in fact witnessed the precariousness of this translation since on one occasion they discovered that the videos from Blip embedded within their LiveJournal posts no longer functioned, even though they were still viewable directly on Blip, and this problem persisted for some time. The community believed the reason for this prolonged malfunction was that Blip did not have the resources to promptly respond to changes made in other platforms.

Another errant behaviour related to video hosting platforms involved YouTube and how some content rights holders went about generating copyright claims against users. There had been considerable disagreement amongst rights holders, YouTube, and fans spanning both periods of fieldwork concerning how much copyright material (in the form of film and television clips and music tracks) fans were legally permitted to use in their video montages. YouTube had provided tools to allow rights holders to pursue claims against uploaders of videos they believed infringed their rights such as a content matching functionality, which compared uploaded videos against a database of copyright material to detect infringements, and a dispute system that allowed rights holders to trigger YouTube

to issue an infringement notice against an uploader and to manage the dispute process between them. While the LiveJournal vidding community had generally been hostile to YouTube and rights holders over what they considered a draconian interpretation of the law, resulting in many infringement notices being issued that they felt were unjustified, they believed some infringement notices were in fact being generate automatically without the video content even being examined. One such example involved a community member who had received an infringement notice for a video that only used sixteen frames from content owned by the rights holder making the claim, which at the time would have been too short for the content matching system to have detected. The community member believed that the company was using a bot to search keywords related to their content on YouTube and then automatically generating claims on YouTube's dispute system for any matches without first reviewing the videos. The dispute system was provided to content rights holders to allow them to prompt YouTube to perform a (homogenizing) territorialization process to ensure the content hosted on it was compliant with copyright law but the bots employed were generating errant claims that required the community members to use the system to perform ongoing translations as counter processes to prevent the destabilization of YouTube's enrolment in their assemblage: Recalling the formulation of translations that characterized them as an alignment of interests (Callon 1986: 203-211), in requiring the community members to fill out a statement to YouTube claiming that their use of the content in question was in fact within the law, the dispute system was also an actant in a translation process which required them to reaffirm to YouTube that their interests were indeed aligned with respect to only dealing in legally complaint videos (the original affirmation occurring upon acceptance of the terms of service when they signed up for their account, which was part of the initial enrolment process of YouTube into their assemblage).

The final case study concerns the California Community Media Exchange, which was an association of seven community media centres that were involved in various activities related to the production and broadcast of community television and radio. The focus here is on the online distribution activities related to the public access television programmes produced by members of the local community at two of those centres: Davis Media Access (DMA) and the Community Media Center of Marin (CMCM). DMA had developed their own platform for online distribution of public access programmes produced at their centre, which involved a website they built embedded with videos from their own video-on-demand server. Maintaining this platform was time consuming and DMA, like many of the centres, operated on a very limited budget. As a result, they looked for ways to either automate the various tasks related to maintaining their platform or delegate them to the community producers themselves so as to reduce the burden on their overstretched staff. To this end, at one stage DMA was involved in the development of a new content management system that was part of the Open Media Project (OMP), which was an initiative managed by a group of community media centres in various parts of the US and based on the Drupal content management system. When complete, this new system would allow producers to handle much of the distribution process themselves (e.g. uploading videos, creating programme records, entering metadata) and automate other aspects (e.g. encoding, routing videos and metadata to the broadcast system).

DMA's attempt to enrol the OMP content management system into its video distribution assemblage proved unsuccessful however, and while the details of why this enrolment ultimately failed are beyond the scope of this chapter, one contributing factor was that when the OMP system was part of the distribution assemblage it sometimes caused it to malfunction. This was due to the assemblage not being sufficiently coded:

Recalling DeLanda's (2010: 13) formulation of coding as a stabilization process involving language, in this instance DMA's lack of resources meant that not only were staff and producers using the new system not receiving sufficient training in its operation but also that adequate operating documentation was not produced. The decoding of the distribution assemblage was increased by software bugs within the OMP system as fixes and workarounds related to these sometimes required changes to procedures that made aspects of the limited training and documentation obsolete. This lack of relevant training and documentation sometimes resulted in the new system being used incorrectly, which led to the malfunctions.

CMCM used Miro Community, embedded within the centre's website, to distribute their community producers' videos. CMCM did not host the videos themselves, but rather allowed the producers to set up accounts on Miro Community and link them via RSS to the third-party video hosting sites used by the producers. On one occasion CMCM found its online video distribution assemblage subject to a similar deterritorializing processes as the one experienced by some members of the LiveJournal vidding community: An update to Blip had resulted in videos from that platform no longer appearing in Miro Community and CMCM's suspicion was that the Participatory Culture Foundation, which developed and distributed this free and open source platform, did not have the resources to rapidly respond to changes in the industry. The problem was not in fact rectified until Blip provided a further update. This deterritorialization process occurred again, but in a slightly different form, when Blip began supporting high definition videos, which was a feature adopted by the producers but one that was incompatible with Miro Community. Rather than wait for the Participatory Culture Foundation to provide a solution, CMCM attempted their own translation process to enable these two platforms to coexist again. While their ad hoc

modification to Miro Community worked, they considered it precarious and believed that a more stable solution would require more fundamental changes to the platform than they had the resources or expertise to conduct.

Conclusion

Rather than treating the errant behaviour of media systems as simply anomalous instances of technical breakdowns or human error, the theoretical approach of this chapter frames them as the consequence of the inherently precarious nature of assemblages resulting from the various destabilization processes they are subject to, which contest the stabilization processes that facilitate the assemblages' nominal behaviour. That is, this approach does not address these errant behaviours in isolation, but rather treats them as diffused through wider socio-technical assemblages and part of the continual flow of processes and counter processes that form, stabilize and destabilize those assemblages. It does this by tracing the various relations between the different components of these assemblages, addressing how they associate and disassociate from each other: The errant behaviours relating to LiveJournal experienced by the vidding community, for example, were the result of the different processes that emerged from the competing problematizations of it by the community, LiveJournal's administrators, and hackers; from how it interacted with Blip; and from how the members interacted with each other. Because of the heterogeneous nature of assemblages, this approach allows humans, machines, language (such as DMA's manuals and constructive criticism within the LiveJournal community) amongst other things to be

addressed together providing a comprehensive socio-technical account of the glitches, breakdowns and miscommunications experiences by the three case study groups.

Notes

1. The findings in this chapter are based on only a small part of this rich and extensive data set. For additional discussions of it see Hondros (2014, 2016, 2018).

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