## Establishing shaky ground

At the outset, groups were always emphatic that they would not specify in advance what the end-product will look like, and that they often did not or could not even unambiguously say what the show was to be about. As one informant describes: “At every point in the process there are lots and lots of possibilities and it’s unclear what the show is going to look like at the end. In more traditional theater type work you may need to commit to, say, a set two years before the showing so a lot of it is already fixed. But in circus R&D… [mimic an attempt at holding on to something shapeless]. It’s really difficult to navigate that process. (F-2; 27)”. The uncertainty can be distressing and as Catmull puts it, “there is a sweet spot between the known and the unknown where originality happens; the key is to be able to linger there without panicking”. The balance of anxiety and optimism that groups experience establishes the shaky ground upon which they are able to continously grapple with ambiguity.

**Making quality ambiguous** Because the desired end product or goal cannot be unambiguously specified, groups experienced a great deal of anxiety, frustration, and hopelessness from the uncertainty. This negative affect made clear the ambiguity of the value or quality of what they were doing. For example, the following exchange highlights how a group creating a show around the themes of immigration is plagued by uncertainties.

K-1; 20: I don’t know if what we’re doing is too… vain? I just don’t know. I don’t want the audience to be switched off… How?[groans and puts his head in his hands]

K-2; 20: I’m not sure… I guess dramaturgically it works because it comes from a place of honesty?

K-1; 20: Another big thing is, why should anyone care? Why should we be the ones saying all these? [sits down and lean forward with his forearm resting on his lap and his head hanging, looking down at his feet]

In this exchange, K experienced and communicated his frustration and later hopelessness at the fundamental value of what the group is doing. While unpleasant to go through, this makes it clear that the value is ambiguous and kept the group open to re-framing the problem and switching course entirely rather than blindly forging ahead.

**Making progress tentative** In addition to making quality ambiguous, experiencing negative affect about their progress also made it clear to groups that any and all progress they make are tentative. Even if they have developed and refined a particular idea, it could be heavily modified or even dropped later on. For instance, an informant recounted a project where the group had spent a week of time and resources on developing an idea around using dry ice for visual effects but eventually had to completely drop the idea because it could not be connected to the rest of the show. She recalled the decision to drop the idea as “killing your darling” and described it as very emotionally challenging. Groups are anxiously aware that progress they make with ideas may not necessarily be useful. Even after a very productive day of developing several ideas, A remarked that, “Today we keep saying ‘we have something, we have something’, but tomorrow we may have nothing again.” This anxiety is useful for the group as it prevents them from clinging on to routes that may be dead-ends.

**Discovering opportunities** One of the things that initially struck me as surprising during my observations is how often groups expressed optimism about the opportunities and possibilities that arose from uncertainties, despite the anxieties and frustrations it seemed to be simultaneously causing them. Describing this open-ended process: “An experimental circus show can be about anything. That’s what makes it so exciting.” Later the same informants said of developing ideas for the show: “When you find something, you have a feeling, you’re so excited – you’ve discovered something!” (C-1; 27). While they often could not be sure whether an idea is going to be valuable, they often expressed optimism that elaborating and experimenting with an idea would open them up to new possibilities and directions even if their original intention did not work out. This optimism opened them up to discovering new opportunities for taking their work. For example, one group had spent two days cutting up felt pieces to hang from the ceiling to test out an idea they had for a visual effect. This was quite a costly experiment as they had limited access to the venue they were doing R&D in. When asked how likely they thought the idea was going to pan out, an informant responded that, “We’re somewhat sure but also open to it bringing us somewhere else. It might inspire something else, or it might work better as something other than the original idea and that would be good too. (T-1; 4)”

**Managing paralysis** Affect and a focus on affect were also a way for groups to move ahead despite paralyzing uncertainty. As described earlier, groups sometimes experience debilitating feelings of anxiety and hopelessness that stop them in their tracks. In their process of navigating ideas, groups often explicitly talk about eschewing cognitive functions such as evaluation. They made statements such as “if we don’t think, we’ll get there” and focused instead on their actions and their affect responses to those actions. They have a certain faith in the process that allows them to move toward exploring the unknown and stay in the ambiguity without panicking. These beliefs fortify and sustains groups in their navigating. They often made statements such as “we just have to do it over and over again because it’s r&D”. (That’s pretty shit - Ryan?)

## Creating generative momentum

**Energizing groups to explore** The process of adapting and refining ideas is rife with uncertainties and difficulties and groups have to be sufficiently energized to engage in it. Affect energizes groups in the following ways:

Positive affect during exploration allows group to experience exploration as a fun, inherently rewarding activity as well as frame further episodes of exploration as enjoyable. or instance, when asked what their plans for exploration were for the day, an informant responded: “I don’t know what we’re going to do today… We’re going to play! It’s always fun [laughs]. (H-3;11)” The positive affect derived from the exploration itself is seen as desirable and rewarding - this motivates groups to engage in the process regardless of the outcome. Later in the same conversation, the group discussed an idea they had collectively engaged with and as they were talking through some of the possibilities with the idea, one group member said, “Let’s try it… Let’s jam!” They tended to frame idea exploration as something quite frivolous and easy to get started with and continue doing, frequently saying saying “have a little play with [the equipment/the idea]” or referring to physically demanding activities such as aerial straps or partner acrobatics as “jumpy jumps” and “bouncing time”.

Affect also energizes groups by transforming the pace of their interactions. When the group experience positive affect such as a sense of progress, they become much more responsive to each others’ comments and suggestions and are prone to acting upon ideas immediately. In this following example of L’s group making shapes with aerial silks, for example, the pace is slow at first and the group seemed discouraged from an earlier episode of unproductive exploration. As they become successful in making the shapes, the group seemed encouraged and the mood shifts to become more optimistic. At the same time, they communicate more both verbally and non-verbally by making eye contact and gesturing. The pacing of interaction is much more staccato at this point. Whereas before, an idea might be talked over or questioned, it is not immediately acted upon. From an observer’s perspective, there was a palpable change in the energy in the mood from heavy to light, the pace from slow to quick.

Everyone seems a bit tired and it’s taking them a long time to make the shapes because they are moving slowly… Over the course of the next 15 minutes, they become more successful with the making the shapes. They are making more eye contact than before and there’s now much more vibrancy in the space. They are no longer dragging their feet and are moving much faster than before. Someone had an idea about wanting to move the ladder to the pulley to rig the silk in a different way and they immediately set about doing it. The lethargy is gone.

**Using shared affect to converge** Another way through which affect generated momentum in navigating ideas was by providing a pathway of convergence for groups. Having a consensus about whether and which ideas are worthy of further pursuit is crucial in allowing groups to move forward, but where there is a lot of uncertainty groups may not have similar understandings of quality or goals which makes convergence problematic. I observed groups to build consensus using shared affect such as excitement and enthusiasm rather than through explicit criteria or evaluation. For instance, the episode below illustrates the interactions around an idea that the group was excited about.

Lin explains the cat’s cradle, “It’s this children’s game where you have two pieces of string between your hands and you loop them back and forth in a pattern and make all sorts of shapes with them, such a rabbit or a broom.” Ros and Ann listened, rapt. Their bodies were leaning slightly forward toward Lin and their eyes were fixed on her. When she was done explaining, Ros picked up the thread of the conversation immediately: “Imagine making those shapes with our bodies, it’ll be so cool.” Ann, without missing a beat, agrees: “Yes we can do it with silk or rope and we can play with different shapes.” Lin throws out a suggestion: “We can try the simple broom shape first. You’ll see just bodies moving around in the space and nothing is happening and then suddenly – boom! You see a fully formed shape!” Ros nods and adds, “Yeah and you’ll still be able to see the ropes between them that’s connecting them.” The group continue in this way for around another five minutes, with Ann making one last suggestion about how cool it’ll be to play with the heights of the people making the shapes. At this point it was clear to everyone that this was what they will spend the afternoon on when they get back into the studio.

Firstly, these moments of convergences begin with group members sharing explicitly subjective, affect responses they have to ideas. Here, Ros communicates her subjective liking of the idea with the statement “it’ll be so cool”. These types of affective-charged responses were often elicited during navigation with group members asking “how do you *feel*”. These responses were also accepted as they were, and group members were not expected to back their responses with more cognitive oriented rationales. In conversations, groups often referred to these type of responses as stemming from “instincts” or “taste”.

Second, the shared interest and excitement around the focal idea maintains engagement with the focal idea. Here, Ann suggests trying the idea with a particular type of material and Lin adds a useful starting point from which they can explore this idea. It is clear that they are making comments and suggestions meant to clarify or extend the focal idea of cat’s cradle. In the absence of shared enthusiasm for the focal idea, group members tended to make suggestions that are unrelated to and essentially serve as alternative to the current focal idea. When an idea does not garner shared excitement, however, it is simply dropped from the conversation and typically never mentioned again.

Lastly, in the example the group was able to converge upon the cat’s cradle as an idea to develop further without ever explicitly verbalizing their individual rationales for liking this idea or how they see this idea as been connected to the larger concept. This allows groups to side-step a more cognitively oriented discussion about the value of ideas which may end up as long discussions without any clear leads. By building consensus around shared affect, groups can move forward with ideas even if goals and quality cannot be ambiguously specified at the outset.

## Creating opportunities for re-orientation

**Creating pause** While experiencing positive affect energized groups and generated momentum to propel ideas forward, negative affect had the opposite effect of putting the brakes on the navigating. For instance, in an episode where group H+A were exploring the idea of rubbing ink on the body to communicate not recognizing one’s own body in dementia, A communicates her subjective, emotive response that she “like the texture of it”. Where they share in these visceral responses, groups are typically very quick to affirm and communicate their own responses, making statements such as “yeah, I like it too and I also like [this other aspect]. In fact, the most common response to any ideas or suggestions is always”yeah, and“, reminiscent of the technique of”yes and-ing" used in improvisation, intended to allow group members to build up on each others’ ideas. Here, however, there was a long, uncharacteristic silence. This silence changed the rhythm of the navigation by interrupting the flow of interactions.

The first word that H says after the silence is “but” - a sharp departure from the usual statements of acknowledgment and agreement. This highlights that she did not feel the same way about the idea as A, and has a different subjective response to it. She pauses again before finally saying, “I don’t see the connection”. A tense silence followed.

In these episodes, tension tends to arise from a tussle of creative control between group members who have different subjective responses to ideas. H is reconciliatory and concedes that it is perhaps worthwhile to explore the idea further if A feels that it is worthwhile. But when A takes her up on her offer she subtly demurs, repeatedly saying “I don’t know”. In these circumstances of talking back and forth about the value of ideas, group members often used the phrase “I don’t know” to indicate their hesitation rather than saying no outright. At this point they still focused on their individual affective responses, and did not try to convince each other with rational reasons or standards whether an idea is worthy.

These episodes are also characterized by a lack of immediate resolution. When group members had different affective responses they tended to maintain their differences. They were clearly aware and acknowledged that they have diverged, but this divergence is not typically resolved. Often they made statements such as, “we don’t have to make a decision today” and moved on to a different idea for the time being. In the case of H+A, they stopped talking about the idea and decided to switch to taking some promotion footage for social media.

**Scoping** Where they experienced negative affect, groups tended to scope the navigation process by setting some arbitrary rules or parameters. Whereas positive affect such as excitement tended to lead groups to be more open-ended, negative affect such as frustration or weariness tended to lead groups to pre-define the space within which they explore. Doing so scopes their navigation by limiting the number of possibilities they can encounter. For instance when an idea was brought up by a group member, an informant responded, “My idea now is to limit our ideas to the equipment we have now.” It also provides them with useful starting and stopping points as they explore ideas. For instance. after a slow, tiresome morning, group F was about to spend ten minutes improvising how to combine puppetry and aerial silks when one group member (F-2; 24) suggested that:” We should set some themselves some rules. For example, two things that have to happen during the improvisation, so that we’re not just completely doing random things.”

**Problematizing connections** When groups collectively experience negative affect as they are unsure of where they are going in the creative process or the value of what they are doing, this leads them to surface and question the connections between ideas and how ideas are in turn related to the broader concept or theme of the project. They did this in two main ways:

When group members experience negative affective responses to ideas, particularly when it is different from others’ responses, they question the connection between the focal idea and the broader problem. For instance, when H had a different subjective, negative response to the ink idea, she made statements such as, “I don’t see the connection to concept right now” and “I think we need to be more choosy [for ideas connected to concept]”. This calls the connection into question for the group and lead them to examine it directly.

When group members experience negative affect during navigation such as frustration or confusion, one or more members questioned if they were oriented and making progress toward the correct goal. For instance, in an episode where L taught the rest of the group the basics of puppetry by making hand puppets out of aerial silk, the group spent almost half an hour learning puppetry. The energy levels were low and group members were following along but visibly confused, tilting their heads and often frowning at their puppets. R asked, “How is this related?” and immediately everyone stopped what they were doing and tried to answer that question. If they had been experiencing positive affect they would have continued what they were doing instead of questioning the purpose of the episode. Often when the group feels uninspired, frustrated, and a lull in their navigation, members asked questions such as “What are we trying to achieve here?”, forcing the group to examine their goals and what they were doing to progress toward those goals.