

# Designing and deploying a 'compact' crowdsourcing infrastructure: A case study

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## Abstract

The Web 2.0 phenomenon of 'crowdsourcing' is now an accepted means of enabling 'democratic' content creation and the validation and authorization of content online. However, the technical implementation of crowdsourcing systems is not without its challenges. Systems designed to accommodate extremely large crowds are easier to equip with techniques that exploit the signal to noise ratio to derive useful output. For smaller groups it is often less a matter of filtering out noise and more a matter of filtering out single voices clamouring to dominate discussion through barnstorming tactics or system circumvention. This article discusses and analyses a case study focused on the design and deployment of a 'compact' crowdsourcing infrastructure, a design specifically intended to subvert and overcome the shortcomings of applying well-proven large-scale collaborative methods to a recognizably smaller group.

## Keywords

collaboration, crowdsourcing, user-content, web 2.0

## Introduction

A term now embedded in the lexica of digerati and designers, 'crowdsourcing' has emerged as *the* approach to harnessing the voluntary power of people to reach a particular aim (Howe, 2006). Made possible by the advances of Web 2.0 technology, crowdsourcing has been used for a range of projects, including gathering public consensus on particular issues, generating content and producing some given end product.

Often credited for the term's creation, *Wired* columnist Jeff Howe defines crowdsourcing as:

the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call. This can take the form of peer-production (when the job is performed collaboratively), but is also often undertaken by sole individuals. The crucial prerequisite is the use of the open call format and the large network of potential laborers. (Howe, 2006)

Crowdsourcing assumes that:

- the collective knowledge of a larger mass of individuals is to be considered a boon near equivalent to that of an individual expert when considering their median consensus; and
- the cost or effort invested in amassing these individuals to achieve a desired outcome is less than the cost or effort required to avail oneself of an individual expert.

This approach to problem solving and content generation has been effectively exemplified by the 'Netflix Prize'. Netflix, an online DVD-rental service ran a continuous open call for collaborators to design a filtering algorithm that best predicted the film ratings of their users.

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theonering.net/ also demonstrates the power of crowdsourcing. This fan community, dedicated to the works of J. R. R. Tolkien, was leveraged by director Peter Jackson to crowdsource pivotal creative decisions regarding the translation of the Tolkien's *Lord of the Rings* trilogy onto screen. As Hudson-Smith et al. (2009) note: 'Randomly sampling the opinions or calculations of a large number of users might lead to data and information that is surprisingly accurate and that, in some cases, cannot be recorded in any other way'.

Although the concept of determining end-user consensus around content generation or creative decision-making has proven successful among large contributing populations, the question remains whether such methods can be made feasible on a substantially smaller scale. Are there insurmountable limits to the usefulness of a crowdsourcing model when dealing with small populations? If so, what are they?

Working in conjunction with a new media studio specializing in digital publishing and social networking and guided by a typology of online creative communities as outlined by Kozinets, Hemetsberger and Schau (2008), we sought to design a crowdsourcing infrastructure for a small online population, attempting to accurately predict the ways we would need to adjust our design to cater for fewer people and testing out these predictive designs in a real crowdsourcing campaign.

## Psyncopation Inc. – A Case Study

### Company Profile

Psyncopation Inc. is a new media studio and publisher whose primary aim is to encourage the recognition of works developed by undiscovered artists, writers and other creators, by providing them with online tools and a collaborative environment that encourages intercommunity feedback and social networking.

Psyncopation's secondary aim is to acknowledge the contributions made by fans to the development of creative works and branded properties within the community; to engage the fans of genre entertainment; and to encourage fans to offer their opinions and their loyalty, thus fostering the relationship between fans and creators.

Seeking to achieve both of these objectives, Psyncopation designed its own social network to house and support creators of varying sorts (creative writers, artists etc.) along with their content. This network also acted as a platform from which to launch various campaigns that would determine, through crowdsourced means, which members of their creative community would have their work elevated to the next level of success e.g. a user-generated story treatment being translated into a screenplay or an artist's work being selected for use as the cover of an upcoming graphic novel.

Crowds 'manifest an emergent collaborativeness' (Kozinets, Hemetsberger and Schau, 2008) and it was Psyncopation's key interest to cultivate that same 'collaborativeness' in their own community.

### Crowdsourcing Campaigns

Psyncopation's original crowdsourcing campaigns typically consisted of a month-long call to action, asking willing community members to contribute any work that might be deemed suitable for the competition in question.

The success of all submissions would be determined solely by members of Psyncopation's social network through a voting process. Community members (those with an account with the social network) could voluntarily take part in a voting process during each campaign. The goal of only having logged-in members participate was to ensure that those who partook in the voting process were users who had some significant investment in the community and its inhabitants.

Psyncopation's voting system asked community members to rank their top five choices among eligible creator contributions. Not all five voting slots needed to be populated by a user. User votes would be tallied by determining who had the most votes for a given rank, and this not only determined a winner, but also the relative popularity of eligible creator contributions.

During each campaign, users could also comment on and critique the eligible works of creators, suggesting modifications or changes to nearly every aspect of their submission. Implementing these changes and establishing a dialogue with voters often helped creators garner more votes, effectively generating a series of smaller, individualized crowdsourced followings throughout the community.

This succinct design capitalized on communal consensus to determine those works most suited for wider consumption and provided a supportive platform for burgeoning creators. However, because Psyncopation's community is highly creator-centric, the contributors to the community were somewhat low in number, averaging around 400–500 people. Furthermore, because the majority of contributing members were creators, the environment was as competitive as it was collaborative. This raised several problems pertaining to the operation of their campaign design.

### Original Design Obstacles

The original approach faced the following endemic obstacles:

1. **Barnstorming Tactics.** Because a user only needed to complete a simple sign-up procedure to become a member of Psyncopation's social network, campaign contenders began to recruit new members into the community as a way of guaranteeing more votes on their behalf. This would distort results during campaigns, as competing members played a veritable game of tug-of-war, each struggling to draft in more outside support. As a result, outcomes in early campaigns were often at the mercy of an alternating flow of newly

- joined site members, whose membership simply represented a partisan vote. Needless to say, individual users were also capable of generating multiple accounts on their own behalf, and thus multiple votes.
2. **Collusion.** A co-product of voter barnstorming was the collusion of site members among themselves – especially when a campaign would be picking multiple winners across several months. Consequently, winners and would-be-winners began exchanging support between campaigns as part of an agreement to ensure that all those participating in such a pact would ultimately have their work selected. This clearly began to devalue the campaign's ultimate aims.
  3. **One Voice = One Vote.** The underlying dysfunction that undoubtedly bred the prior two was the fact that to have a vote in the Psyncopation social network one simply needed to be a member. Although this approach was modelled on the democratic ideals that underpin popular notions of crowdsourcing, this particular crowd was using the loophole of the member-to-vote ratio to manipulate campaigns at a political level. With all votes being equal and with the ability to generate one's own loyal citizenry only a simple sign-up process away, certain portions of the Psyncopation social network devolved into highly polarized partisanship that, whether through grievous intent or not, managed to effectively stratify the population of the network. This frequently left those who were not politically savvy within the community to toil in relative obscurity regardless of the quality of their work.

Given that Psyncopation did not want to abandon its vote-ranking system, the vote-to-voice ratio would be the first thing that would need to be addressed in any redesign of the system.

### Framework and Proposed Solutions

In developing a solution for Psyncopation's network, we wanted to be able to effectively identify the type of crowd we were dealing with. Using the creative community typology outlined by Kozinet, Hemetzberger and Schau (2008), we were quick to realize that our subject community had several unique properties that made it somewhat difficult to characterize.

Kozinet et al. (2008), differentiate between four types or dimensions of online creative communities: *crowds*, *swarms*, *hives* and *mobs*. **Crowds** tend to be very large groups of individuals who assemble to achieve a given aim that appeals to their community (like a single call to action or contest); **swarms** refer to the type of information contributed by large, incidental groups of autonomous individuals as they move organically through various web 2.0 experiences (like users on Amazon, Ebay, and Flickr); **hives** refer to small, passionate self-formed groups that

tend to tackle personally identified challenges, but to great effect (e.g. the open source movement, esoteric wiki resource creation); and **mobs** are fleeting assemblages of individuals who briefly unite for a short-lived cause or project when a community leader or another communal voice calls them to action.

Kozinet et al. plot out these dimensions along a spectrum between the communo-ludic (participation for fun) and the telo-specific (participation for achievement), differentiating their four categories by their 'collective innovation' (2008, p. 345).

In analyzing Psyncopation's community, we noted that Kozinet et al.'s notion of crowds was distinguished from the other community types largely by their size and by the purpose of the crowd's congregation. Psyncopation's networked community definitely had end-goals, as users aimed to either be chosen a winner or see their desired pick win, but their crowd was also a community with shared social interests and one that voluntarily subsisted between campaigns. This resembled more of a hive that would spring to life through an external call to action, positioning Psyncopation's network as one which squarely straddled both the communo-ludic and telo-specific poles of Kozinet et al.'s typological spectrum. This information would guide us through some of the specifics of implementing our design.

With this information in hand and with a well-documented assessment of Psyncopation's previous design, it was realized that any solution to adjust Psyncopation's current crowdsourcing design would have to achieve three things:

- **Merit-Based Voting:** Allowing fair competition, while maintaining the ranked voting structure that Psyncopation wanted, required a system that could determine and subsequently value legitimate members of the community – and thus, their votes – over those members who were abusing duplicate accounts or only signing up friends to place partisan votes. 'One voice = one vote' was not going to work any more and it was decided that well-entrenched members of the social network should have more of an influence on the outcome of crowd-sourced campaigns. A method of user self-legitimation would be needed.
- **Capacity for Social Achievement:** With the necessity for a merit system in place, our team determined that in order for merit-based voting to work, we needed a way of registering that 'merit', both determining what it would be and how it would be tracked. We also needed to ensure that all forms of registered activity that counted towards a user's communal status could be effectively translated into some form of visual representation that was both transparent and concise.
- **Participatory Shelf-Life:** Given that we were going to be designing a merit-based system, we also needed to

equip this system with checks and balances. These checks and balances would need to take into consideration the relative importance of various merit-based user inputs which meant we needed to determine the type of impact user inputs were already having in the trenches. We wanted to ensure that the more meaningful activities conducted by site users would have a greater imprint on their social achievement as compared to less meaningful<sup>1</sup> activities. We wanted this to be reflected both in terms of the merit value assigned to a user for a particular input and also the staying power of that merit value within the community.

Our objective then was to meet the above criteria by developing and implementing system mechanics that could be deployed without disrupting the community or putting any existing users at a significant disadvantage. Given the lack of any sort of pre-existing merit-based framework at the time of implementation, neither of these factors was likely to be a concern.

## Design and Implementation

The design steps taken to alleviate each of the specific concerns as raised above are detailed below.

### *Addressing Merit: Social Kapital*

Psyncoption provided our design team with a list of all available inputs that a user could generate while within the social network. Given that we wanted to dispense merit, based on these inputs, we had to allocate values to each of them based on their relevance to the fundamental social machinations of the community. Inputs that were of the greatest value to the community would be valued highly, while superficial inputs would be granted very little value. For example, if a user took the time to provide written criticism on another user's creation, this would be valued highly, since providing such constructive feedback is the lifeblood of Psyncoption's social network. Conversely, if a user simply ranked that creation using the site's one-click 5-star rating system, this input would carry less value. The assignment of merit would be based largely on empirical observations made by the Psyncoption user experience team and the social network's community manager.

With all user inputs being tracked this way, merit points could now be accumulated by users based on their actions within the community and the merit points accumulated through these inputs would translate into what Psyncoption would refer to as 'social kapital' i.e. the underlying metric for how Psyncoption would gauge a user's contribution to the community. This was a simple beginning that opened the door to resolve the more complex matters that needed to be addressed.

The first of these problems would be the inability of our system to discern the quality of certain inputs. Although we now had a list of actions and a series of values assigned to them, we were still applying numerical values to what were clearly qualitative activities. A blog post, for example could easily be faked by a user. The system would have no way of determining whether a user's blog post was sheer nonsense, or a meticulously constructed masterpiece.

We began by placing limits on the amount of times per day that a user could benefit from performing various inputs. As such, a member would cease to accumulate social kapital points after performing a given input a certain number of times (i.e. point accumulation for blog posting ceased after two blogs within 24 hours). This would minimize system abuse, though it wouldn't prevent it.

However we still needed some way to distinguish what were 'real' or authentic user inputs from fake ones. This would prove tricky. Technical solutions such as back-end semantic engines would simply be too expensive and unwieldy for Psyncoption's needs. Psyncoption argued for a 'people-based' solution – in other words, we would need to find a way to effectively crowdsource authentic communal contributions.

Borrowing from conventions established from sites such as Digg.com, we decided to assign to almost every community-visible user input a new rating scheme consisting simply of a 'thumbs-up' or a 'thumbs-down'. This would serve two particular functions.

Firstly, the 'thumbs-up/down' system was a binary rating method of either approving or disapproving the content of another user. This content could range from user commentary on artwork to blog postings to forum comments. On pages that such content was visible in an organized feed (e.g. a feed page showing all comments on creator works for that day), a user-applied thumbs-up or thumbs-down would now determine how far up or down the feed that item would live. An initial thumbs down rating from a user would have no impact, but subsequent thumbs-downs would be tallied by the system and begin to send the contribution further down the feed list with every subsequent negative rating. This would effectively send poor or belligerent content out of view, deterring community vandals.

Secondly, because the community was so small, Psyncoption could use 'thumbs-downs' as system flags, calling attention to particular users who were abusing the system either to accumulate merit or simply being delinquents for the sake of delinquency. This would allow Psyncoption's technical staff to consider each flagged user on a case-by-case basis, assessing their inputs to determine whether a user should be warned or banned for their behaviour. This case-by-case analysis also allowed for the judicious treatment of users, allowing Psyncoption to distinguish between system abusers and community members that simply might just be unpopular or disagreeable. Finally, a tracking of each case would allow discernable trends to



emerge over time and enable Psyncopation to evolve its more organic system to a predictive modelling approach, should the time and resources ever become available.

Ultimately, crowdsourcing (or a microcosmic variant thereof) the quality of these merit-based inputs was intended to serve as a self-regulating mechanism, effectively assigning users the responsibility to keep their own community abuse-free and allowing Psyncopation a way to cull the community of potential campaign miscreants.

We now had a seemingly adequate system of merit-acquisition and self-regulation in order to grant users a status based on the quality of their contributions to the community. The next challenge was to determine how we could visually represent that merit acquisition to the community's members.

### Addressing Social Achievement: Rank Ladder

We began to resolve this challenge by reminding ourselves of Kozinet et al.'s community innovation spectrum in an effort to put our aims in perspective:

Some of the communities and teams tend to be goal focused, to be oriented fairly deliberately toward particular innovative outcomes and to reaching generally delimited goals that pertain to particular creations. We term this type of goal-related focus a *Telo-specific orientation*. Other communities and teams [see] useful innovations produced not necessarily as an innovative contribution, but simply as a part of the normal routine of being involved in online communities pertaining to these interests. We term this type of orientation a *Communo-ludic orientation*. (Kozinets, Hemetsberger and Schau, 2008, p. 345)

We realized that we would need to reconcile Psyncopation's telo-specific community goals (namely the aim to see creative works from within the community, shaped into successful, marketable properties) with the emerging communo-ludic facets of our merit-based system (2008). We needed to continue to promote our users' engagement with community, encouraging that participation as a goal in and of itself, and making the means of communal engagement as enticing as the teleological culmination of the site's *raison d'être*. We opted to design a system with game-like properties that would allow us to preserve the integrity of the community's functionality. This would be a difficult balance considering that we were trying to deter abuse of our social kapital system of merit distribution (or any incentive to abuse or exploit).

We took some of our cues from successful online role-playing games, adopting a series of levels that a player could achieve based on how much social kapital they had accumulated. We plotted out ten ranks, each with a different playful title attached to them and brainstormed in consultation with Psyncopation's community manager and

interaction designer. We tied social kapital accumulation to these ranks along a curve.

A decision had to be made regarding the transparency of this process however. Whereas standard role-playing games allow full disclosure of where a player is in relation to their next achievable rank, we also wanted to discourage early abuse of the system. We needed some equilibrium here.

Former game designer and Sony CEO Raph Koster notes that players in any given system are inherently conditioned to recognize patterns, and will seek those patterns out, perfecting that recognition until either failing to do so in frustration, or becoming bored with their own mastery (2005). The latter is what Koster refers to as, 'grokking' – and given the invariability of this outcome, we elected to make ranks fully transparent to maintain incentive, but withhold from users their actual social kapital total and the existence of activity caps. This way, users would be encouraged to work their way intuitively through rank progression as to slow their initial recognition of our system's merit-dispensing pattern. If grokking was going to be inevitable, we wanted to make our users' journey through our communo-ludic infrastructure as enticing as we could without compromising the site's fundamental purpose.

In that regard, these new ranks not only carried with them a particular social status, but the higher the rank of a community member the more weight their vote carried in each and every Psyncopation campaign. This would ensure that the more a user contributed to the community over time, the more of a say they would have in the outcome of site contests.<sup>2</sup> This guaranteed Psyncopation some level of management over the signal-to-noise ratio of their small crowd and completely eliminated the possibility of barnstorming votes.

However, choosing this design left some areas of concern. First, how would we avoid user collusion in such a system – especially once a significant number of people had accumulated high ranks of social kapital. Second, how would we drain the system of social kapital once it was well saturated with high-end users? Would the power division between social kapital haves and have-nots be equitable? We needed to develop a mechanism that decongested the system of its kapital build-up in a timely, but judicious way.

### Addressing the Shelf-Life of Influence: Depreciation

Of all the challenges in our design, addressing the shelf-life of user-accumulated social kapital may have been the most difficult, since several other facets of the design hinged on the aptness of the solution. A number of options were considered, from implementing seasonal expiration dates for user-accumulated social kapital between campaigns to making social kapital itself a part of an expenditure model or economy of trade.

In the end, Psyncopation preferred to give social kapital a gradually decaying shelf-life, ensuring that merit points, once acquired, would slowly diminish over time. This meant that voting power in the community could not be held without the need to maintain it, and all crowdsourced activity would largely lie in the hands of the most committed users.

We also had to decide on which on-site activities were the most durable or had the greatest impact on the community. These activities would depreciate most slowly and this would dispel the feeling of futility among site users who might feel they had put a lot of work into a series of particular contributions, only to see their rank flounder.

The fleeting nature of social kapital (which under a decay model would now potentially diminish quite drastically within a month depending on the nature of the activities that had gone into its accumulation) meant that mid-campaign alliances would likely be untenable, and at best, ephemeral. This did not necessarily exclude the possibility of collusion between users, but it would certainly make political power-plays a more difficult proposition.

Incorporating depreciation meant that there would be a consistent ebb and flow in establishing the community's most esteemed members at any given time. High-ranking members would not be able to leave the community for an extended period of time and return wielding a disruptive vote in Psyncopation's new crowdsourced campaigns. If a user wanted to ensure that their signal would be picked up in this small community, they would now have to earn that privilege.

## Results and Analysis

The new crowdsourcing system was launched in time for a campaign calling for written fictional work from its community. Users had approximately a month to become acquainted with the new social kapital system before the commencement of the campaign, which meant community users had nearly two months between the campaign announcement and its completion. Our task during this time was to qualitatively record any instances of barnstorming, system circumvention, collusion or any other form of vote-manipulation. We were also tasked with observing the three specific solutions we had implemented in an effort to determine their success or failure.

### Barnstorming and Collusion

The first immediate change noted was the complete disappearance of voter barnstorming. Ostensibly remedied by the necessity for a user to earn their vote through genuine participation (or some approximation thereof), the increase in new user-accounts during this new campaign was drastically lowered with most new user-accounts created early during the two month period and effectively falling off thereafter.

Collusion did persist to some degree as users still openly bartered on forums with some using their position within a network of highly ranked members as a bargaining chip for returning the favour during a later campaign. However, none of the competing creations involved in any of those open-forum discussions would win the campaign itself. Although diminished, collusion was not entirely eliminated with this design.

### Social Kapital: Analysis

Users quickly caught on to the social kapital system, but with the exception of a handful of would-be colluders, there was no observed flagrant attempt to abuse the system. Furthermore, when compared with a subjective rank list of the community's most active participants as developed by Psyncopation's staff, ranking users by their earned social kapital produced a near match. This supported Psyncopation's initial merit-point weighting for the sites available inputs. For Psyncopation, this was considered a redeeming validation.

There were still a number of posts and comments made, which one could identify as being most likely constructed in the name of point accumulation, but most of them rode the line between being useful criticism and cursory remarks.

### Rank Ladder: Analysis

Although no official statement was made to the community regarding the influence of one's rank on one's vote, the relationship gradually became evident as users noted the occasionally wild shifting of the campaign's live contest rankings. This alerted users to the importance of rank quite quickly, but again there were very few observed abuses reported, as those who were swaying the votes did nonetheless appear to be voting honestly. The few delinquent cases that could be detected through site statistics after the fact appeared effectively stemmed by the system's integrated activity cap.

### Depreciation: Analysis

Although we were only able to continue observation for a short period during the collaboration, we checked in occasionally after the project to see how the depreciation model had held up. What was becoming apparent was that our rate of decay seemed to be in need of adjustment – top community members were accumulating points and maintaining them with relative ease, using their influence to sway subsequent campaigns. Even some more desultory community members had managed to maintain a relatively impressive level of social kapital. This suggested that depreciation either needed to be far more drastic or replaced and/or augmented with a different 'point-sink' mechanic. Out of all the changes we had implemented in our new design, this one

seemed to be the undoing of the design alterations that had otherwise catalyzed some recognizable levels of success.

Had we had the time and resources to deploy and test iteration, there are certainly some things we might have done differently. These are listed below.

### *Critique and Adjustments*

Firstly, it should be noted that we did not have the time to conduct any further iterative testing, nor the resources to conduct any community split-testing between designs. This certainly would have been beneficial both to improving the design and for learning more about the type of ‘crowd’ we were dealing with.

The element of depreciation seemed to be the weakest pillar in our design, and unfortunately the rest of the system’s functionality depended highly on its flawless execution. There are a few technical suggestions that we feel might have prevented some of the shortcomings experienced in particular with the implementation of depreciation.

### *Movement from Depreciating Total to Expendable Total*

With this adjustment, social kapital points would still be accumulated by users, but these points would need to be ‘spent’ in order to place votes during campaigns. Since our system design already bore a close resemblance to a tiny virtual economy and with the clear necessity to drain that system of its currency of power, an expendable total would have ensured that merit points needed to be dispensed wisely by their owners. This would of course entail the full disclosure of merit point totals to individuals, but given the community’s growing familiarity with the worth of particular communal inputs, this change would not seem a disruptive one.

### *Exponential Voting System*

Given the move to an expendable system of merit, we would have suggested the implementation of an exponential voting system: a way of multiplying one’s vote by investing more social kapital. For example, a single first-place vote for a creation might cost a user 100 points, but to cast two of such votes would cost 1000 and so forth. Only those fully engaged community participants would be able to make the necessary sacrifice to enhance their voting power, and furthermore, only the most committed members of the community would be able to make their points back in time for the next campaign. This would mean that a user would now need to flex their acquired social kapital through choice and strategy rather than communal omnipotence. This approach would not entirely eliminate the possibility of collusion, but it would certainly give users greater cause to consider their choices.

We think the above two adjustments would have promoted a more thoughtful consideration of submitted content by our community and would have deterred voters from participating capriciously in campaigns in which they had no real vested interest.

On a non-technical note, the one potential fallacy that was anecdotally disregarded throughout our design was that of assuming that committed community members were the best contributors to rely on in a compact crowdsourcing model – a notion based solely on their commitment to invest. But of course, there was no determinable correlation between such a commitment and success of a voted property. However, in orienting the crowdsourcing model to fit such a small crowd, Psyncopation felt that these types of members were the taste-makers of their community and thus needed to have their signal, ‘boosted’, and we complied with this sentiment despite any seeming conflicting aims it may have produced.

### **Conclusion**

Ideally, we would have taken this design into subsequent iterative stages for further testing and refinement if we had the capacity and funding to conduct a more substantial longitudinal comparison and analysis of designs, or design split-testing. However, there were certainly some informative take-aways from this work.

Our initial question was whether we could design a crowdsourcing model for a smaller collective of individuals, while still avoiding the pitfalls of voter barnstorming, vote manipulation and other unsavoury manifestations of inter-community partisanship. We feel this research suggests that this is entirely possible and we believe we have made strides towards a functional example of such a design. However, outlining a method in the development of such a design seems to be something that cannot yet be captured in a formula or set of heuristics. It would require more work.

That said, it would not seem brazen to assert that the smaller the collective in question, the more attention needs to be paid to communal and case-specific mediation. Small crowds like those of Psyncopation’s creative community closely resemble what we have identified as a crowd/hive hybrid according to Kozinet et al.’s typology: a small group that certainly possesses a communal telo-specific aim, but also maintains an active desire to congregate with each other, spark new inter-community projects and celebrate each other’s work even when there were no active campaigns in which to participate.

Although ours was surely an ad hoc solution when compared to contemporary notions of a ‘crowdsourced’ design, Kozinet et al. bring our attention back to one thing – there are more than one or even four particular flavours of online creative communities, and the more we aim to *identify* the particular social, ludic and other salient threads that make

similar and differentiate these various types of collaborative communities, the closer we come to realizing the relative strengths and weaknesses of each type of group. We would advocate more research on designing for small ad hoc crowds as we believe that this would certainly benefit the body of knowledge on this subject, and would ultimately make clearer those best fits for particular applications and projects in industry and elsewhere.

## Notes

1. The 'meaning' of these inputs relied solely on Psyncopation's own user research and its assessment of those things that both they and their users valued most within the community. As such, 'meaning' as described here would ultimately be a series of purely subjective metrics derived from a list of prioritized inputs.
2. This was something highly valued by Psyncopation.

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President of Zeros 2 Heroes Media, **Matthew Toner** began work in the new media industry (when it actually was new) as a co-founder of CanApple New Media, a founding executive of We Media Inc, and Managing Director of Oven Digital's Canadian office. More recently, he has worked on more than two dozen entertainment productions ranging from convergent television projects to immersive digital experiences to triple-A videogame franchises to independent film. As President of Zeros 2 Heroes, Matt has driven the company's business vision and assembled a team whose skills range from the arcana of database architecture to the intricacies of six-panel layout for mobile comics.