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Three Reasons Why Swarm Intelligence Trumps Polls and Focus Groups

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Businesses can't survive without researching what consumers want from their products. And with over 27 million new businesses opening in the US every year, understanding customers has never been so valuable. Yet focus groups, a powerful method to research consumer preferences, haven't changed much since the Mad Men days.

Creating focus groups is still a time-intensive and expensive process that makes little use of the vast technological infrastructure that didn't exist when Don Draper was downing bourbon with his clients.

These days, the primary uses of technology to quantify consumer preference are online polls and surveys. They're everywhere, allowing users to rate everything—books, movies, hotels, restaurants, etc.

The problem, however, is that typical online polls and surveys have been shown to be flawed instruments that distort consumer sentiment. So, market researchers are in a bind, forced to choose between flawed information gathered through online polls and surveys, or expensive information gathered through old-fashioned focus groups.

That's where swarm intelligence—a new method understanding large populations—comes in.

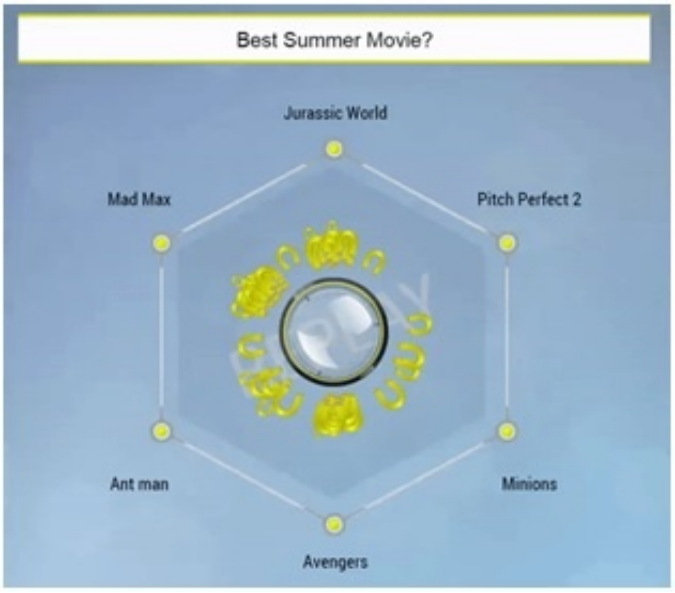
Swarm Intelligence Defined

Rather than poll the group as individuals and finding the average sentiments through number-crunching, users form online swarms that can "think together" in real time, forming a unified collective intelligence that converges on the sentiments they can best agree upon.

This method is modeled after Mother Nature. Many social species pool their collective knowledge, wisdom, and intuition, and turn them into rapid optimized decisions, harnessing their group intelligence as a flexible living system rather than as a set of crude polling data.

An Example

The image below shows a real-time swarm of online users responding to a simple question: "What was the best summer movie?"



If you instead reviewed the box office data, as many marketers do, you'd assume that the public believes Jurassic World was the best offering from the studios, raking in $643.3 million and greatly outperforming the other films.

But the real-time swarm intelligence below reached a different answer: Mad Max.

Does that result reflect a flaw in swarming? No, it reflects a strength. After all, if we look to the movie critics as an authority on movie quality, we'll see that Mad Max was the highest-rated film of options listed. That reflects a core principle of swarm intelligence... It treats the public with respect, tapping the wisdom of the population rather than harnessing the noise.

Although yet to be implemented by marketers on a mass scale, swarm intelligence is already being explored for a wide range of uses that harness the collective wisdom of groups.

Recently, Humboldt-University of Berlin and RAND Corporation wanted to see whether a computational collective of radiologists could outperform single practitioners when viewing mammograms, reducing false positives and false negatives. They did just that.

In a separate study conducted by John Carroll University and the Cleveland Clinic, a collective of 12 radiologists diagnosed skeletal abnormalities. Tapping the collective wisdom of the group, the radiologists produced a significantly higher rate of correct diagnosis than any single practitioner.

But why should swarm intelligence be appealing to marketers? Especially when online polls are ubiquitous, giving preference data on every topic under the sun.

Swarm intelligence should appeal to marketers because it means the following:

1. Getting the unified sentiment vs. the average opinion

When trying to understand a group using a poll, you get the statistical average of opinions collected from disconnected individuals. There's no give and take. There's no finding of common ground. The average opinion of a group reveals what's most popular, but that's not necessarily what's most appealing to the full population.

Consider polling data for the GOP primaries. Polls tell us which candidates are the most popular at any given time, but they don't reveal what the party as a whole could most readily agree upon. And that is what is most important... With a dozen candidates, you can easily have a few who are the most popular, and yet the group as a whole could still be unable to converge support behind him or her.

Swarms reveal the solution that the group can best agree upon.

2. Reducing the effect of social influence bias

We euphemistically call it "trending" or "going viral," but sometimes something gets popular online simply because it got popular online.

Said another way, it's easy to assume that online popularity is reflective of some deep support within the population, but it

just could be a random impulse gone astray, amplifying noise rather than harnessing sentiment.

A brilliant study out of MIT, Hebrew University of Jerusalem, and NYU shows that if you randomly assign the first vote in an up-voting system similar to Reddit, that single first opinion will influence the final result by 25%, even if thousands of votes follow. This is why online ratings are so hard to trust. Like it or not, when you give a rating on Amazon or Netflix, you are influenced by the votes that came before you. This means the very first votes have far more influence than all the others.

Swarming is different. It's a synchronous process where everyone responds together at the exact same time. There are no leaders and no followers, just a system that works together to find the solution that optimizes the overall sentiment.

3. Seeing decisions emerge in real time

Because swarming is synchronous, the data reflects the simultaneous interactions among the full population, allowing market researcher to observe the decision-making process as it emerges. This often reveals the trade-offs being negotiated across the population, exposing which factors were most important to which demographics.

For example, if a market researcher for a political party asks a swarm to choose the most viable candidate, the real-time data will expose which participants were steadfast during the swarming process and which were flexible.

Moreover, the data will reveal which options those flexible participants are willing to switch among during the decision. This might reveal, for example, that middle-class votes in the West are willing to switch their support from Candidate 1 to Candidate 2, but only when it's clear that the alternative would be group convergence on Candidate 3. With many such trade-offs being exposed at the same time, the insights are very deep.

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Swarm intelligence can help marketers better understand consumers and thus better target the public at large. However, we should ask ourselves how smart swarm intelligence can get as it continues to develop.

With the potential to engage millions of consumers around the globe—each brimming with unique ideas and insights and opinions—swarm intelligence is the step in the right direction for marketers wanting to stay one step ahead of what consumers are looking for.