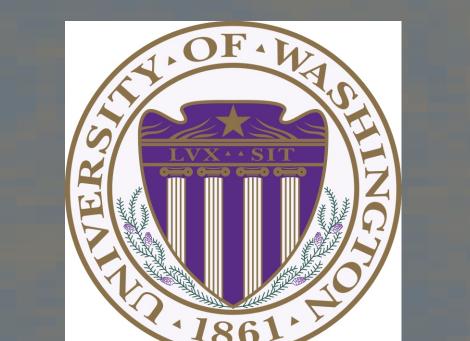




Tapping A New Source:



The Anatomy Of A Successful Crowdfunding Campaign For Vertebrate Paleontology

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ABSTRACT

Since the start of modern crowdfunding close to decade ago, the industry has experienced phenomenal growth, exceeding \$5.1 billion dollars in 2013. Artists and entrepreneurs adopted crowdfunding early, now commonly relying on it as a mainstream funding source. Scientists, and particularly paleontologists, have been exceedingly slow to tap this

Here we report a case study of three recent successful paleontology crowdfunding campaigns. They are: 1) Sidor (Burke Museum) excavation of dinosaur remains (\$2,395 goal); 2) Wilson (DIG Field School) - earth science teachers' participation in fieldwork (\$10,000); and 3) Schein (Bighorn Basin Dinosaur Project) - excavation of dinosaur remains (\$5,985). The financial goals of each project were exceeded, with 101 donors pledging \$19,665 total.

Crowdfunding websites emphasize the importance of a robust campaign start; our results suggest that this is not critical for success. The Bighorn Basin Dinosaur Project followed this model, but the Burke Museum project experienced its most significant progress near the campaign midpoint, and the DIG Field School project only made significant strides near the end. Both Bighorn Basin Dinosaur Project and Burke Museum projects reached their goal near the campaign midpoint, while the DIG Field School project met its goal on the last day. In general, donors pledged steadily until the raised totals approached the goal, at which time there was a sharp increase in number of pledges. After reaching the goal, campaigns experienced little activity for the duration. The average donation for each project was strongly proportional to its goal. Each campaign relied heavily on a few large donations; ten donors contributed over 50% of the total funds raised.

In the Bighorn Basin Dinosaur Project campaign, donors fall into seven categories: 1) past field workers, their family and friends (PP); 2) family and friends of campaign organizers (FF); 3) staff of the campaign host company (St); 4) avocational groups (AG); 5) professional paleontology and earth science colleagues (Co); 6) museum support groups (SG); and 7) other individuals with no known ties to the campaign (Ot). Of the \$6,800 raised from 64 donors, PP contributed the greatest percentage of funds (30%) from the greatest number of donors (22). Four AG donors accounted for 23.6% of the total, ten FF donors contributed 17%, and five SG donors contributed 15%. The smallest average donations came from Co and Ot; Co contributed the least amount of funds (2.4%).

In an age of shrinking government support, crowdfunding presents a viable alternative to fund mission critical aspects of paleontological research, with the added benefit of raising public support and awareness.

CROWDFUNDING: A NEW SOURCE

Crowdfunding is an internet-based fundraising strategy in which people or groups of people seek donations for projects on dedicated crowdfunding websites. Since its beginnings in the mid 2000s, crowdfunding has experienced exponential growth and is now a multibilliondollar industry (Swart, 2013; Wheat, 2013).

2012 (Noyes, 2014)

- > 1 million campaigns worldwide
- \$2.7 billion industry in North America

- \$5.1 billion industry worldwide (Noyes,
- > 1,000 crowdfunding internet sites (Swart,

 >\$60,000 raised per hour, and 442 new campaigns daily in March (Noyes, 2014)

Expected to reach ≤ \$96 billion (Noyes,

Certain industries and segments of the population - particularly artists and technology entrepreneurs - adapted quickly to this new model and now rely on it as a mainstream source of funding. Scientists, however, have been slow to adopt crowdfunding into their fundraising arsenal. Ecologists and evolutionary biologists have lead the way (Wheat et al., 2013; Bisceglio, 2014), but paleontologists have lagged far behind, with only a handful of attempted crowdfunding campaigns to date.

Here we present the results of three successful vertebrate paleontology-based crowdfunding campaigns, and identify numerous keys to success.

A CASE STUDY

Three Vertebrate Paleontology **Crowdfunding Campaigns**

Burke Museum Campaign

Excavation & transportation of *Triceratops* remains.

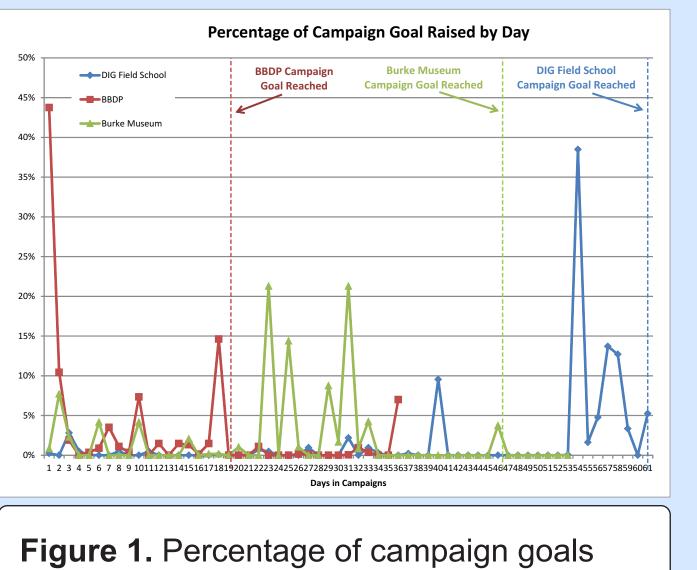
Bighorn Basin Dinosaur Project (BBDP) Campaign Excavation & transportation of dinosaur remains.

DIG Field School Campaign

Educating earth science teachers at an active excavation.

Together, these campaigns raised \$19,665 from 101 donors. Each campaign exceeded their goals.

Fig. 1. Though it is highly recommended, a very strong start to a campaign is not always necessary for success. The Bighorn Basin Dinosaur Project campaign followed this model, but the Burke luseum experienced the most activity near the campaign's midpoint. The DIG Field School paign had its greatest success near the end.

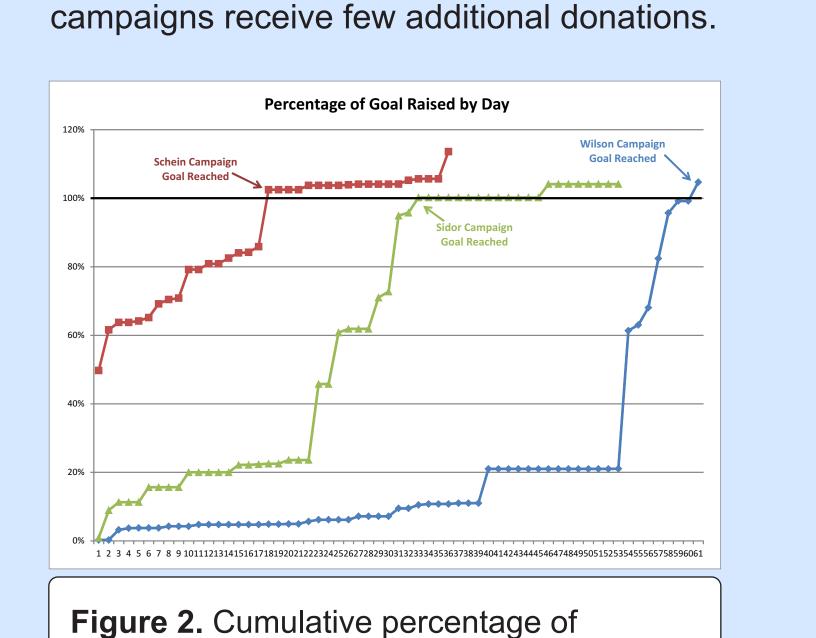


reached per day.

back science you believe in

Fig. 4. In general, the objective of crowdfunding is to accumulate relatively small donations from as many people as possible. However, each campaign still relied on a few large donations. Ten donors contributed over 50% of the combined campaign goals.

Fig. 2. In general, donors pledged steadily throughout the campaigns. Higher donations rates are typically at the start of campaigns and as the total raised approaches the campaign goal. After the goal is met,



campaign goals by day.

Fig. 3. The average donation is strongly proportional to the campaign goal.

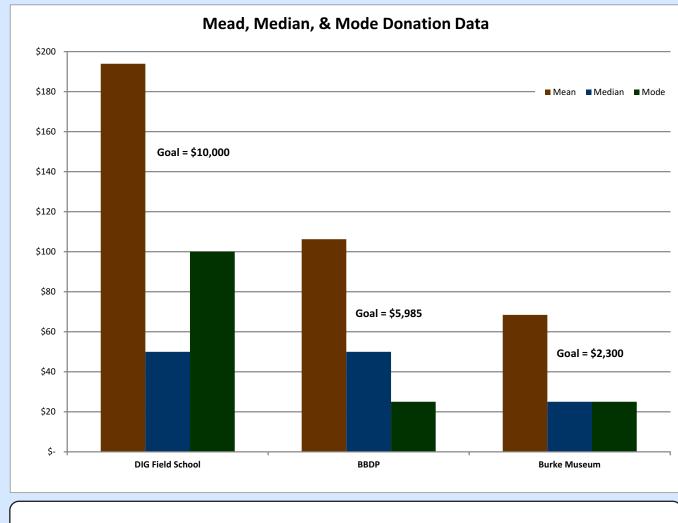


Figure 3. Cumulative percentage of campaign goals by day.

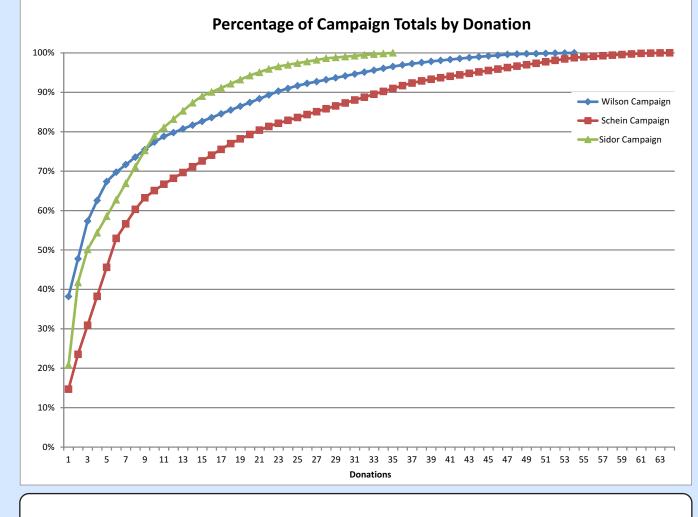


Figure 4. Cumulative percentage of

campaign goals by day.

Bighorn Basin Dinosaur Project (BBDP) Campaign

Original Goal: \$5,985 Donor Categories (Fig. 5) Total Raised: \$6,800 (113%)

Figure 5. All donations to the BBDP

 Past Participants (people who had previously participated in BBDP field activities, including their friends and family members)

RocketHub

- Family / Friends of campaign organizers.
- Staff of the hosting crowdfunding website
- Avocational paleontology groups (including their
- Colleagues (professional paleontologists and earth
- Museum Support Group
- Others (individuals who have no known connection to the campaign organizers and are assumed to campaign by category. have discovered the campaign "organically" (e.g.,
- word-of-mouth, internet and campaign host site browsing, etc.))

Lessons Learned

- Individuals closest to the research project (Past Participants & Family / Friends) are the most likely to donate
- Donations from professional Colleagues are minor relative to the other categories.
- The number of donations from the Other category are second only to Past Participants, but the average donation is the second lowest. Future success is dependant upon cultivating this group, most likely via social media and other "outreach" opportunities.

Success in crowdfunding is almost entirely dependant on two things: 1) Outreach (Before, During, and After)

CROWDFUNDING: IT'S TIME

- a) Investigators who engage larger audiences in their research
- early and often have more successful campaigns (Wheat et al., 2013; Bisceglio, 2014).
- 2) Outreach (Strategies)

Other keys to success

- a) Social Media!!: There is no cheaper, faster, or more efficient way to reach massive numbers of people that might be interested in your project.
- I) Greater presence on social media is directly linked to increased funding (Swart, 2013; Cha, 2015).
- b) Traditional media, public talks, etc., etc.
- c) Creative video, demonstrating your passion (Wheat et al.,
- d) Use simple, non-technical language. The "public will only fund what it understands" (Correll, 2014).

Success in crowdfunding is *not* dependent on:

 the campaign host site used (Wheat et al., 2013) the project subject matter (Wheat et al., 2013; Cha, 2015) Instead, success is dependent on the size of the crowd that you bring to the site and to your research project.

Benefits of Crowdfunding

The benefits of crowdfunding science are numerous, both for individual projects in the short term, and for the science, more generally, in the long term. Crowdfunded science:

- cultivates public support for your research project & for science in general (Wheat et al., 2013).
- reaches a broader audience than traditionally funded projects (Wheat et al., 2013).
- forces scientists to foster new relationships & develop longstanding ones with the public, which are more likely to pay dividends - both monetary and otherwise - in the future (Wheat et al., 2013).
- enjoys higher success rates.
- often adds to the research already being done (Correll, 2014).
- allows scientists to circumvent government bureaucracies associated with many traditional funding sources (i.e., NSF, NIH) (Cha, 2015).

REFERENCES

Bisceglio, P., 2014. Crowdfunding works for science. Pacific Standard. Retrieved from http://www.psmag.com/businesseconomics/crowdfunding-works-science-96336

Cha, A. E. "Crowdfunding propels scientific research." The Washington Post. 18 Jan. 2015.

Correll, N., 2014. Crowdfunding of science leads to innovation and better public engagement. The Conversation. Retrieved from http://theconversation.com/crowdfunding-of-science-leads-to-innovation-and-better-public-engagement-26268

Noyes, K., 2014. Why investors are pouring millions into crowdfunding. Fortune.com. Retrieved from http://fortune.com/2014/04/17/why-investors-are-pouring-millions-into-crowdfunding/

Swart, R., 2013. World Bank: Crowdfunding investment market to hit \$93 billion by 2025. Mediashift. Retrieved from http://mediashift.org/2013/12/world-bank-crowdfunding-investment-market-to-hit-93-billion-by-2025/

Wheat, R. E., Y. Wang, J. E. Byrnes, and J. Ranganathan, 2013. Raising money for scientificresearch through crowdfunding. Trends in Ecology & Evolution, 28(2):71-72.

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