Marine conservation in nonprofits: An analysis of advocacy and outreach campaigns.

by

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Abstract

Despite vast amounts of policy action and awareness-building around marine conservation issues, evidence suggests society has pushed itself past planetary boundaries. Environmental campaigning is one of the methods used to relay a message and to persuade stakeholders into policy and management actions that protect marine resources. However, very little work has been completed to assess the state of environmental campaigning and to determine best practices moving forward. This research applies three methods to analyze marine conservation campaigning: a cluster analysis of campaign outputs; semi-directed interviews with campaign managers; and the Q methodology to quantitatively assess opinions on the current discussion surrounding environmental campaigns. We propose three recommendations: 1) target audiences should be defined and messaging should be tailored to those groups; 2) values-based messaging should become more prevalent within campaigns; and 3) funders should understand the importance of messaging and cater granting schematics to include campaign development.

Keywords: environmental communications; campaign development; marine conservation; non-governmental organizations (NGOs); Q methodology.

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1. Introduction

Despite the vast amount of human activity that has altered marine ecosystems (Halpern et al., 2007; Halpern et al., 2008;; Harvey et al., 2013 Stojanovic & Farmer, 2013), conservation and management actions that mitigate these impacts have been limited. An example of this failure lies within Canada's marine protected areas (MPAs), which have been noted as a conservation initiative capable of restoring marine ecosystem health (Fisheries and Oceans Canada, 2013). Management failures, where governments and stakeholders do not complete agreed-upon objectives, have led to only 0.1% of Canada's marine areas as classified as a MPA (Jessen, 2011), falling behind both New Zealand and the USA in progress (Stark & Ladell, 2008). Although many ecosystems have been found to be quite resilient to human-based pressures (Holling, 2003), it is only a matter of time before they are pushed past their "planetary boundaries" (Rockström et al., 2009). Other recent political developments and policy failures, including modifications to the Canadian Environmental Assessment Act and the Canadian Fisheries Act, have severely weakened the regulatory obligation and capacity of government agencies to protect ecosystems and natural resources (Favaro et al., 2012; Reynolds et al., 2012).

Marine conservation campaigns are one tool designed and used by individuals and groups within society to start discussions (Cox, 2006; Moore, 2010; Manheim, 2011) and raise concerns about the impacts of human activities on our marine resources and the ecosystems in which they are embedded. Activities like MPAs (Ban et al., 2010), fisheries (Pauly et al., 2003; Crowder et al., 2008; Worm et al., 2009), and species-specific conservation issues like shark finning (Baum et al., 2003; Godin & Worm, 2010) have all been discussed, critiqued, and given media attention. In democratic societies, citizens have the right to use various mediums to voice opinions to governments, industries, the public, and each other. Advocacy campaigns have been a predominant medium to mobilize and showcase public support for a variety of conservation policies and initiatives (Cox, 2006; Berman, 2010; Moore, 2010).

Advocacy campaigns are a multi-faceted approach to that surround an issue and are organized into specific, tactical actions designed to achieve defined goals. As defined by Cox (2006), environmental campaigns normally have six primary attributes. First, campaigns are purposeful and tactful, involving strategy and defining an ideal outcome. Second, campaigns are aimed at large audiences and not the networks of a small group of people. Third, campaigns have specifically defined time limits, and after that time has elapsed, the' window of opportunity' for action has closed. Fourth, campaigns are an organized set of communications activities, involving message formation that is targeted at a specific audience. Fifth, campaigning is often done to change external conditions (society's treatment of the environment) or to change a governmental policy or practice. Finally, campaigns are waged by non-institutional sources - individuals, community action groups, and environmental nonprofits (Cox, 2006).

Campaigning is notably different from critical rhetoric, a form of communication that questions and criticizes a social norm, policy, value, or ideology (Cox, 2006). These rhetorics have been prevalent within many notable environmental efforts, including Rachel Carson's *Silent Spring* (1962) and Paul Erlich's *The Population Bomb* (1968). Greenpeace activists commonly engage with critical rhetorics by using alarming images to capture people's attention about specific issues. These questions and awareness-raising events have often complemented campaigns, but are not based in specific time or space limited objectives. It is important to make this distinction to understand which initiatives are classified as 'campaigns' versus other thought-provoking events that do not follow the strategic development that campaigns require.

Understanding the target audience(s) and tailoring a campaign to these audiences is fundamental to its success (Cox, 2006; Manheim, 2011). Some groups define two targets: a primary and a secondary audience. The primary audience refers to decision makers who have authority to make decisions that affect or complete the objective of the campaign. The primary audiences for most policy-based campaigns are governments or industry stakeholders that can vote to change or mandate changes in relevant procedures and regulations (Markel, 2004; Cox, 2006). Secondary audiences are often called 'public audiences' and refer to those who can hold primary audiences accountable to some degree. This includes a variety of constituencies – segments of the public, the media, and opinion leaders – who may have no direct affiliation with the primary

audiences, but can leverage constituencies and mobilize support for the proposed change (Cox, 2006). Identifying these primary and secondary audiences is similar to a 'power mapping' approach used by some campaigners, where the key influencers and constituencies are charted out to determine the best approach for a campaign (e.g. Berman, 2011).

Other theories have been proposed that can assist in defining audiences in relevance to campaign objectives. Manheim (2011) notes that campaigns that define themselves as "awareness initiatives" (he calls these Public Information Campaigns) might be best approached by targeting audiences whose opinion could change based on the campaign. Thus, campaigners should not target those who are already on board, nor should they target those who are vehemently against a cause. Instead, the section of people that do not have strong opinions on the matter in either direction (often called "swing" voters) should be targeted (Lakoff, 2004; Manheim, 2011). This group is often in the majority and comprises a diversity of people, making other forms of target definition potentially irrelevant.

Once an audience is defined, it is important to hone the content of the campaign into a coherent message (Manheim, 2011). Various campaigns often take various approaches, incorporating the use of data and factual information and the use of values and frames to relay a message. Previous theories states that information deficits are the problem to creating change in society; when informed about ecological risk and environmental crises, publics will likely take action to mitigate or prevent such risks or crises (Dickson, 2005). Updated theories note the importance of emotional values when persuading publics (Lakoff, 2004; Crompton, 2010). Here, Crompton (2010) makes a call for groups to change their practices and incorporate broader cultural values and frames when communicating environmental issues, one that considers the people they target and what frames they use to (dis)engage with a conversation. The recent conversations in communicating science to public audiences have complemented this call by providing tools to shift away from information-based messaging (Olson, 2009). Values-based approaches can allow campaigns to better engage with audiences and produce a shift towards values that will produce desired results.

Audiences and messaging are inherently important, but must be targeted while determining how feedback can be iteratively implemented into a campaign. 'Audiences' might imply one-way communication: that there is a messenger (campaigners) and a receiver (audiences). This is not the intent behind our use of the terminology. Campaigners should understand how the message is being received (through connecting with the audience – focus groups, surveys, etc.) and understand how that might change their current work. Environmental campaigner and communications consultant Chris Rose (2010) notes that "campaigners that focus on 'sending messages' will never succeed: they will persuade no one but themselves. Successful communication needs to be two-way: more telephone than megaphone, with the active involvement of both parties."

Despite vast bodies of literature on environmental campaigning (Rogers & Storey, 1987; Cox, 2006; Crompton, 2010; Rose, 2010; Manheim, 2011), very little research has been done to assess the elements of conservation campaigning specifically aimed at the marine environment. Here, we addressed this research gap by analyzing how marine conservation campaigns are designed, delivered, and assessed within nonprofit organizations. We examined both internal (i.e., campaign development) and external (i.e., communications outputs) aspects of campaigns by investigating the key characteristics of marine conservation campaigns and how they differ among campaigns. We investigated how marine conservation groups strategize/plan their campaigns, and the extent to which a campaign's communications strategy match its pre-determined goals. We also determined how the current state of funding impacts conservation campaigning. Finally, we provide recommendations to improve the likelihood of success of conservation campaigns.

2. Methods

2.1. Hypotheses

Our research aimed to provide context for how marine conservation campaigns are created, delivered and assessed. We estimated that nonprofits would largely differ in their communications approaches (i.e., some groups will use information deficit approach and some with values-based approaches). Despite recent calls for change (Crompton, 2010), the landscape for this change is rather recent and thus, we did not expect groups (even those who agree with values-based communications) to have made a large change in their campaign communications practices.

We also predicted that funding plays a major role in shaping campaign goals and objectives. Granting agencies often intersect with nonprofits to determine how a campaign is organized and shaped. As representatives of civil society look to outside groups for financial assistance, we hypothesized that funding models inevitably shape the way nonprofits conduct their campaigns. Evidence may take the form of modified goals and objectives to satisfy funders.

Finally, we investigated the extent to which a communications strategy matched the pre-determined goals of the campaign. We hypothesized that feedback mechanisms would be a key factor in this relationship. If the campaign values feedback, goals and objectives are likely to change depending on the comments received from target audiences. Those campaigns that do not investigate how their message is being received may be likely to maintain their goals and objectives.

2.2. External Campaign Cluster Analysis

To determine both similar and distinguishing characteristics of marine conservation campaigns, 54 campaigns were analyzed using printed and online materials (e.g. flyers, videos, websites), collected through online avenues (website searches, social media streams, e-newsletters). Campaigns were found through online searches of known organizations conducting marine work, and through word-of-mouth. To qualify for our analysis, campaigns must be presently or historically conducted in Canada or the United States of America through a nonprofit. Campaigns included topics of shark finning, sustainable seafood, ocean noise, plastic bag bans, and shoreline cleanups.

Eighteen attributes (Table 1) were identified based on a variety of environmental communications theorem and were used to analyze campaigns. Many of our attributes, if used to their full extent, identify with notions of values-based campaigning, including the use of flagship species, narratives, audio/video, and a spokesperson/opinion leader. We also identified attributes that may allow us to determine how well audiences are defined, including the defined roles of society, First Nations, and governments, as well as an attribute explicitly asking about target audience definition. Other attributes were added that were deemed to test for any possible differences in campaign development (e.g. defining goals and objectives).

To test for differences among campaigns and the primary factors driving variation amongst them, we ran a Ward's hierarchical cluster analysis using a Gower dissimilarity index. All 18 attributes were independent characteristics and weighted equally. Dissimilarity indices and clustering were completed using the 'cluster' (Maechler et al., 2013) and 'vegan' (Oksanen et al., 2013) packages in R (2013) R Core Development Team (2010). To determine how clustering would best be resolved, non-parametric MANOVAs were completed across 9 different clustering scenarios (2 to 10 clusters), comparing the coefficient of determination (R^2) amongst each scenario. We then determined the optimal number of clusters by identifying a cut-off where adding an additional cluster resulted in a sharp decrease (over 10%) in the amount of explained variance (commonly known as the 'elbow test'). The number of clusters before this cut-off (3) was selected as optimal (see Figure A1).

Table 1. Attributes defined for the campaign analysis.

	ATTRIBUTE	0	1	2
1	**Defined Goals**	No defined goals	Loosely defined	Well defined
2	**Defined Objectives**	No defined objectives	Loosely defined	Well defined
3	**Specific Target Audience**	No obvious target audience	Implicit target audience	Well defined
4	**Audio/Video Usage**	No AV use	Little AV used	AV used throughout campaign
5	**Spokesperson/opinion leader**	No spokesperson used	Spokesperson mentioned	Spokesperson active
6	**Flagship Species**	None used	FS used	FS central to campaign
7	**Use Value (environment as resource)**	None explicitly used	Implicit/loosely mentioned	Explicitly mentioned
8	**Ecosystem Services**	None explicitly used	implicit/loosely mentioned	Explicitly mentioned
9	**Use of Narrative**	None used	Used	Narrative central to campaign
10	**First Nations Role**	None used	Implicit/loosely mentioned	Explicitly mentioned
11	**Government Role**	None used	Implicit/loosely mentioned	Explicitly mentioned
12	**Role of Society**	None explicitly used	Implicit/loosely mentioned	Explicitly mentioned
13	**Monetary Value**	None used	Implicit/loosely mentioned	Explicitly mentioned
14	**Numerical Data**	None used	Used few times	Heavily used
15	**Collected own primary data**	None used	Mentioned	Explained
16	**Petitions**	None used	Available	Main method for action
17	**Provide Feedback**	None used	Loosely accessible	Integrated into campaign
18	**Volunteer Opportunities**	None used	Loosely accessible	Integrated into campaign

2.3. Semi-Directed Interviews

To obtain qualitative information regarding campaign development, we used semi-structured interviews with 22 marine conservation campaign and program managers in Canada and the United States of America between 22 March 2013 and 30 May 2013. To select informants, contact information from campaigns in section 2.1 was used, if available. When given, referrals to other potential informants were also used. Although informants were not necessarily linked to campaigns in the cluster analysis, 10 were responsible for one (or multiple) campaigns listed in section 2.1. Campaigners were requested to partake in a semi-directed interview after completing the Q activity (see section 2.3).

This interviewing method was used to gather rich data about the planning, designing, and implementation process within campaigns (Huntington, 2000). An assortment of 16 prompting questions were asked to each informant (Table B). These questions were selected and refined through an iterative process with former campaign managers and were selected to start conversations about the informants experiences on goal definition, funding development, and the overall barriers and catalysts to campaign success and failure respectively. Each informant were given the flexibility to elaborate on any questions, or to provide additional, relevant thoughts of their choosing. No time limits were set on interviews (duration ranged from 15 to 50 minutes) and were either conducted in person or through a phone conversation. Interviews were transcribed and coded for analysis. Informants who did not provide enough qualitative data to analyze were eliminated from the study (n=1).

2.4. Q Methodology

To identify unique and common viewpoints of campaign and program managers on how marine conservation campaigns were designed, produced, and completed, The Q Method (Stephenson, 1953), often shortened to Q, was used on 25 marine conservation campaign and program managers (22 of the 25 respondents were the informants in section 2.2). Q is a technique that applies both qualitative and quantitative methodologies (Brown, 1996) to allow subjective views of respondents into the analysis.

In this sense, Q is most beneficial when aiming to question informants about personal experiences (McKeown & Thomas, 1988), taste, values, and beliefs (Stainton Rogers, 1995). Q has been used in a variety of contentious environmental management issues, including sustainable forestry (Sweeden, 2006), large carnivore reintroductions (Mattson et al., 2006), fisheries (Fairweather et al., 2006) and ocean policy (Wilson, 2007; Haggan, 2012). Q has also been widely used in the political sciences (Brown, 1974; 1980; 1982; 1989; 1994; Carlson, Dolan & McKeown, 1988; Dryzek, 1994; Peng, 1998), a field not too far from the subject of environmental campaign development. It thus seems appropriate to use Q to discuss the debated methods used to mobilize the public.

This methodology is best described through four steps. First, a concourse regarding environmental campaign development was created by sorting through various texts and medias and searching for quotes that describe varying viewpoints. From there, a set of 16 statements was selected that describe the current array of views on campaign development (see Table C1 and Appendix D). Second, the sample of respondents was selected through the same avenue as 2.2. Campaigners were requested to partake in the Q sort activity, followed by a semi-directed interview. If the invitee declined to participate due to time constraints, they were asked to complete the Q sort only (n=4). Third, the respondents would rank the statements on a Likert scale that followed a quasi-normal distribution (see Figure C), allowing few responses in highly agree/disagree areas and many responses in the more neutral section of the scale. The Q sort was administered online through online freeware called PQMethod (Schmolck, 2013).

The fourth and final step was to complete a factor analysis and interpretation of factors. The correlation matrix of all Q sorts was calculated to determine the level of (dis)agreement between sorts (i.e., how (dis)similar each sort is from each other). After this step, the correlation matrix was then subjected to factor analysis to determine the number of natural groupings of Q sorts that exist (similar to the steps taken in the hierarchical cluster analysis seen in the external campaign audit). For each Q sort, a factor loading was determined to detail how each Q sort relates to each factor.

To assist in determining which attributes drove each grouping, factors were then rotated using a varimax rotation (manual rotations were attempted, but varimax was ultimately used for it preserved the most cumulative variance amongst clusters). Factor scores

("the normalized weighted average statement score (Z-score) of respondents that define that factor" (van Exel & de Graaf, 2005)) were then calculated. The significance of these loadings determined which statements were variates (usually $p > 0.01$), difference scores ("the magnitude of difference between a statement's score on any two factors that is required for it to be statistically significant" (van Exel & de Graaf, 2005)), distinguishing statements (difference scores that are exceeded by a statement's score on two factors) or consensus statements (statements that do are not distinguishing between identified factors). Interpretation of clusters from the Q sort were led by distinguishing statements, followed by other less significant but intriguing results found both in the quantitative data and the post-sort interviews.

Interviews and the Q survey were approved by the Simon Fraser Research Ethics Board; study number 2013s0044.

3. Results

3.1. External Campaign Analysis

A three-cluster scenario received the most support from the hierarchical clustering analysis of the 54 campaigns we surveyed (R^2 = 0.158; see Figure A1 for best-fit model and Figure A2 for clustering). Broadly, campaigns were distinguished based on values-based attributes, data-driven attributes and a generalist approach (see Table 6). The 'values-based' cluster (n = 22 campaigns) was composed of campaigns that predominantly used spokespeople to relay a message, visuals of flagship species as a significant part of their campaigns, and petitions (non-parametric MANOVA, $p < 0.0001$ for all three attributes). The 'data-driven campaigns' (n=19 campaigns) were characterized by the use of both numerical and primary data (non-parametric MANOVA, $p < 0.0001$ for both attributes). Relatively, these campaigns used audio and visual aids more frequently (non-parametric MANOVA, $p < 0.0001$). However, since the scale only assessed the presence and prominence of these aids and did not reflect the quality of these materials, the degree to which they fall under a values- or data-based attributes cannot be evaluated. The third cluster (n =13 campaigns) included campaigns that did not utilize any of the defined attributes significantly more than the other two clusters. Furthermore, this cluster used two attributes (defining objectives and mentioning the use value of the environment) less than the other two clusters (non-parametric MANOVA, $p < 0.001$ for both attributes). Therefore, we suggest this cluster describes a 'generalist' approach.

3.2. Semi-Directed Interviews

Interviews revealed a highly diverse set of strategies used in marine conservation campaigns. The number of responses varied per question due to either incomplete answers or not asking the question and some informants replied with multiple answers.

Most campaign and program managers defined their goals as oriented towards awareness and education (8/20 responses) or policy (8/20 responses). Informants identified either ‘government’ (8/19), ‘industry’ (5/19) or ‘the public’ (5/19) as their target audience. The majority of campaign and program managers called their campaigns a ‘success’, as defined by their own goals and objectives. Eight informants identified their campaign as a success, four informants stated that their campaign was ‘not a success or incomplete’, and three informants noted that their campaign had ‘varying degrees of success’. Reasons for successes included the ability for their targets to make small changes and not rely on the government for change (4/20), the campaign’s convincing rallying point (4/20), or the campaign’s strongly motivational message (4/20).

Two barriers that impeded the attainment of campaign goals and objectives were identified by a majority of informants. Obtaining funding was the largest identified barrier (8/18). Funding-related responses included difficulty in obtaining finances for research and developing campaigns, compromised objectives from collaborating with specific funders, and seeking funding from a wide variety of sources, resulting in extra time spent on soliciting and adapting campaign strategies to the funder. Despite identifying funding as a barrier, a handful of informants also noted that campaign goals and objectives were aligned well with the funder’s mission (4/17) and that funders did not place regulations on their campaigns (7/17). The second-most identified barrier was competition in a noisy media environment (4/18). Campaign managers expressed the difficulty of spreading messages to their target audiences due to large advertising costs and the sheer amount of media that people are exposed to on a daily basis.

Most informants identified two ways of obtaining feedback: meetings with stakeholders (8/20) or “word of mouth” (4/20). The latter referred to either the campaign team’s social networks that relayed advice to the team, or feedback obtained from their target audience when asked to take action for the campaign’s cause. No explicit framework was established for obtaining feedback in either case. However, the majority of informants noted that goals and objectives were modified or changed within the duration of the campaign. Changes were spurred by expansion based on external factors, the formation of coalitions with other nonprofits, and compromises with stakeholders.

3.3. Q Sort Activity

Q results sorted responses and opinions on campaign development into five factors (synonymous with 'clusters', but different verbiage is used to distinguish the Q Sort from the previous cluster analysis). 22 of 25 respondents were captured through the varimax rotation of factors, explaining 73% of the cumulative variance in the sample. Factors are listed in order from most to least respondents that best fit within those factors (Table C2).

The first factor (n = 7 respondents) described "Small Community Managers". This grouping was defined through disagreeing that campaigns cannot be completed by the interconnections of a small group of people (Statement #1, Z Score = -2.09, Q Sort Value = -3, P < .01). The second factor (n = 6 respondents) identified "Serious Supporters" and has six distinguishing statements. However, Q methodology focuses on the extremes within the sorts and not on neutralized statements (Brown, 1980). Therefore, the statements most agreed and disagreed with were used to draw trends and formulate the title for this factor. Respondents agreed most about being clear about what a campaign supports (#9, Z = 1.62, Q = 3, P < .05) and disagreed most with the use of humour to convey a message (#12, Z = -1.71, Q = -3, P < .05). Our third factor (5 respondents) encompassed "Independent Campaigners" for their disagreement regarding working collaboratively to come to solutions (#11, Z = -1.46, Q = -3, P < .05). This group was also quite indifferent about the importance of bottom line communication (#13, Z = -0.10, Q = 0, P < .05). The fourth factor (5 respondents) included "Visionaries" for highly agreeing with higher-level visions within successful campaigns (#10, Z = 2.11, Q = 3, P < .01). This group scored fairly neutral on statements regarding analyzing power dynamics (Statement #14, Z = -0.75, Q = -1, P < .05), using humour (#12, Z = 0.88, Q = 1, P < .01), and defining/knowing your audience (#16, Z = -0.14, Q = 0, P < .05). The fifth and final factor (2 respondents) is titled "Random Communicators". Although a small group, this factor disagreed that campaigns cannot exist as random acts of communication (#15, Z = -1.11, Q = -3, P < .05) and showed little support for defining audiences within campaigns (#16; Z = -1.82, Q = -2, P < .01).

Statement #5 (Funding organizations must come to recognize the importance of campaign development and strengthening environmental values) was the only statement

found to have no variation amongst any pair of clusters All factors scored this statement neutral (Q = 0 or -1 for all factors), contrasting interview results in section 2.2.

4. Discussion

Broadly, we found inconsistencies between what the environmental communications theory we have described recommends as good campaigning practices and how campaigners conduct work. Specific audiences are not being defined during campaign development and deployment, which may be a result of various identified barriers. Secondly, approaches to environmental campaigning can be differentiated into values-based or information-based campaigns, resulting in many groups not consciously adopting non-science values into their campaigns. Thirdly, our study found conflicting discussions on funding challenges.

4.1. Defining Audiences & Consultative Campaigning

Many campaigners are not using a primary/secondary audience approach as defined by Cox (2006). No clusters in the campaign analysis showed significance for defining target audiences (Table A1) and interview respondents did not show consistency in identifying targets. Cox (2006) suggests primary and secondary audiences as an organizational method that can assist campaigners in determining who are the decision-makers and which constituencies can be leveraged to hold those decision-makers accountable. Without defining these audiences (or completing a similar approach), it is difficult to create a targeted message that can meet the goals and objectives of the campaign. It is possible that campaigners are not defining their audiences when goals are most related to 'awareness'. For examples, one informant that self-identified their campaign as an 'awareness campaign' described about 8 different secondary audiences, no primary audiences, and was asking each of the secondary audiences to complete the same action without targeted messaging to each group (Respondent 03, March 27 2013). Although the overarching concept of awareness campaigns is quite vague and has limited benefits as an advocacy strategy, Manheim (2011) suggests focusing on "swing" voters and not explicitly defining targets in these cases. This strategy was not mentioned

explicitly during interviews or surveys and is a possibility for future studies. One factor in Q also strongly disagreed with defining a target audience (Random Communicators; see Table 6), but since this factor had only two respondents, it is not a representative viewpoint amongst campaigners in this study.

Interestingly, many respondents showed they do not see the will to consult with all players to work out solutions (Independent Campaigners; see Table 2). This finding suggests that campaigners make a conscious decision to determine who to talk 'at' versus who to talk 'with'. This dichotomy seems quite understandable after investigating the strategies of many groups, as there are some campaigns that use a more integrated approach, whereas others use a more confrontational, non-violent approach. The Canadian Parks and Wilderness Society (CPAWS) (www.cpaws.org) is an excellent example of talking 'with' groups to come to a solution. Their glass sponge reefs campaign uses a combination of petitions, public events, and stakeholder meetings with government decision-makers to involve all parties. Conversely, Greenpeace campaigns have been historically noted to talk 'at' stakeholders in their initial stages. Berman (2011) defines one of her first strategies as a Greenpeace campaigner as: "That sounds like a great idea. They'll hate that!" She later notes the importance of talking 'with' stakeholders on both sides, which came with a loss of respect from some of her original supporters (Berman, 2011). Moore (2010) mentions similar laments as a 'Greenpeace dropout'.

Table 2. Ranking of statements regarding audience definition and consultative campaigning.

STATEMENT	FACTOR SCORE				
	SCM	SS	IC	V	RC
Defining and knowing your audience is essential to a successful campaign.	3	2	3	0	**-2**
If you're going to campaign effectively, you have to be willing to talk to all the players and work out solutions. Otherwise, that's not campaigning, it's just complaining.	2	0	**-3**	-1	1

The feedback attribute in our campaign analysis showed little strength in any of the three clusters (Table A1), and interview respondents mentioned few sources for obtaining

formal feedback. Rather, most campaigners simply ask decision makers how they're doing:

> "From the administration, we've talked to decision makers. We have meetings sometimes with the folks that we're trying to influence. We sit down and have face-to-face discussions about it. They can and do tell us what is effective or what they can or can't do." – Respondent 15, April 26 2013

We call this 'consultative campaigning', where campaigners are asking for feedback directly from the powers they aim to influence (unaccompanied by feedback from the constituencies/secondary audiences they aim to represent). Reasons for consultative campaigning methods might reside in a barrier identified during interviews: noisy media environments. With the massive amount of information presented to people every day, campaigners are finding it difficult to mobilize masses, target specific audiences, and get the numbers of petition signers or change-makers they require. Switching to more consultative methods may be a more efficient way to gather feedback.

> "I guess one of the big barriers has been competing in a pretty noisy media environment. People have limited attention spans and for whatever reason, they're more interested in celebrity gossip. There's just a lot of competing stuff out there and it's hard to get people really to focus on the issues that we care about or to focus on them for a sustained period of time. These aren't particularly fun issues and they don't have easy solutions, so to get people engaged and to have them stay engaged - it's a challenge." – Respondent 15, April 26 2013

Respondents also noted that conversations about ocean issues are difficult to engage people with online as well:

> "The ocean conversation online is actually very marginal compared to Kim Kardashian." – Respondent 16, May 1 2013

Groups like Upwell (www.upwell.us) are researching how to increase the frequency and magnitude of online ocean conversations during seminal events like the Discovery Channel's annual Shark Week series. This type of work will assist in helping other conservation campaigners reach target audiences.

4.2. Information-based versus values-based campaigning

Apparent divisions exist between campaigns; either data is utilized as a rallying point, or they employ emotional values to ask for action from their targets (See values-based and data-based clusters in Figure A2). Although data may be convincing to some audiences, most contemporary studies believe that values and evoking deep frames are one of the most important parts of communications, especially in campaigns that are publicly oriented (Lakoff, 2004; Crompton, 2010). Thus, values-based campaigns (when properly employed) are most likely to create desired changes in publicly oriented campaigns.

Thirteen of the campaigns clustered into the 'other' group in our cluster analysis (see Figure A2). These campaigns often sit in the middle of the values and data based campaigns, employing attributes that fit into parts of the other clusters (see previous CPAWS example re: glass sponge reefs campaign). Although this is a good compromise between values and data, these campaigns may do best when evoking more attributes that are more values-based. Using more relatable techniques (spokespeople and flagship species, as noted in the campaign analysis) may assist in creating desired changes within campaigns.

Feedback, as mentioned in the above section, is also important in any campaign. A perfect values-based campaign would incorporate feedback into a malleable strategy during the course of the campaign (which should include data and facts by understanding which information resonates best with their audience). 'Consultative campaigning' does not mean that the groups obtain feedback from both primary and secondary audiences. Rather, it means the feedback obtained and utilized might be selective based on the stakeholder (i.e., government feedback might be deemed more valuable to the campaign than public feedback). This is a large mistake for a civil society campaign that aims to accurately represent target audiences. We suggest groups that believe they might fall into this category aim to include a multi-dimensional feedback strategy to avoid this pitfall.

4.3. Campaign Funding

Our research found conflicting views on the current state of funding for conservation campaigns. Informants often noted funding as a barrier to campaign success during interviews.

> "Processes can be slow because of bureaucracy, obviously, or just the lack of funding, which is a huge problem now in the environmental world, especially in fisheries… A lack of resources, I would say, was one of the biggest problems. If we had lots of money for everything, we'd have things done a lot quicker." – Respondent 08, April 12 2013

However, 4/17 respondents mentioned that their goals and objectives were well aligned with funders and 7/17 respondents mentioned that their funders never placed regulations on their campaigns. We believe these findings can be rationalized by identifying the *obtainment* of funding as a barrier. The process of securing grants and other funds for campaigns was repeatedly described as a difficult process for campaign managers:

> "We always go through a strategic planning process when we set out to start a campaign. We write up a plan, and then we go and we start hunting for funding, but every funder has a different format that they look at. You adapt that plan to fit into that format, and then another funder - adapt the plan to their format. You farm it out to maybe ten different funders and some of them might give you funding and others don't, and then depending on what funding you receive, it's going to shape the form that the final strategy has to take." – Respondent 10, April 15 2013

As mentioned in the above quote, funding proposals are often tailored to those who are granting funds. Thus, it is no surprise that collaborations between funders and nonprofits will often result in well-aligned goals and objectives. Additionally, a handful of respondents identified their funding process as 'collaborative', where goals and objectives were agreed upon well in advance:

> "If we can define the problem and the solution and work together with a funder, we both have success out of it. That's the best thing to do." – Respondent 21, May 23 2013

Through this process, funders are not placing regulations on campaigns; rather, they are working with nonprofits to ensure that the project is defined to align with the mission and values of their organization.

The only consensus statement resulting from the Q survey was related to funding, where all factors gave the statement a relatively neutral scoring (see Table 3). A partial explanation for this scoring could be based on how respondents were asked to rank a discrete set of opinionated statements regarding campaign development fundamentals. Based on the other fifteen statements, funding may have been a less predominant pressure to successful campaigns. When interviews were conducted (always after the survey was completed), respondents were asked to identify *barriers* to campaign success. This wording is quite different from the more neutralized phrasing used to describe the Q activity and may have provoked a different response. Discords like these also validate the necessity of post-Q activity interviews, as we believe the funding discourse is greater than what the survey revealed.

Table 3. Ranking of funding statement.

STATEMENT	FACTOR SCORE				
	SCM	SS	IC	V	RC
Funding organizations must come to recognize the importance of campaign development and strengthening environmental values.	-1	-1	0	0	-1

4.4. Future Considerations

Based on these results and analyses, we provide a number of considerations for campaign managers that aim to improve the ability to meet their goals and objectives. Suggestions for how to proceed cannot be perfectly applied to the state of marine conservation campaigning, but should be taken with objective reflection of current campaigns that managers operate. We also provide examples that illustrate what implementing these recommendations might look like.

1. Campaigns should ensure proper definition of target audiences (i.e., dividing by primary and secondary audiences) and define objectives that can engage both groups differently. As a part of civil society campaigning, this strategy is important for two reasons. First, dividing tactics into separate audiences allows campaigners to see the interactions between each group and how to mobilize those groups in the most effective ways possible. Secondly, having a strong following of public support on an issue (via secondary audiences) can validate the necessity of the campaign. If the group aims to represent a larger picture, targeting groups and providing evidence of support for the project (and not solely using 'consultative campaigning') is morally crucial.

Importantly, defining audiences cannot be done without having a clear, measurable objective. Many groups have compromised their campaigns when "their objectives are unclear or when they confuse a broad goal or vision with near-term, achievable, and specific actions or decisions" (Cox, 2006). Effective campaigns have a multi-tiered approach with higher-level goals and more specific objectives, which many informants did not communicate during interviews. Using a layered strategy and focusing target audiences based on that strategy could help conservation groups gain strength in their campaigns.

SeaWeb (www.seaweb.org) is a non-profit that collaboratively ran a campaign titled "Too Precious To Wear", dedicated to stopping the use of endangered corals for jewellery purposes. To achieve this goal, the group has two objectives: 1) To stop the use and promotion of coral in jewellery designs, and 2) To list coral under the Convention on International Trade of Endangered Species (CITES). Each objective had a specific primary audience – the former focused on the jewellery industry, and the latter on government stakeholders (Respondent 01, March 22 2013). Specifically, this group used various attributes to target each primary audience - spokespeople and opinion leaders were used to influence jewellers, and primary data and monetary values for governments. Although this group only completed the first objective, the tactics behind this campaign are symbolic of our suggestions regarding targeting audiences.

2. More campaigners should aim to drive values-based messaging into their work. It can be challenging for science-based organizations to translate research into public campaigns designed to stimulate both behavioural and political change. However, changes that campaigners aim to create cannot be completed without finding a persuasive message for target audiences to comprehend. It is imperative for these messages to invoke values by choosing the appropriate syntax that can evoke the desired emotion (Crompton, 2010; Olson, 2009). For science-based organizations, there are numerous bodies of work recently published that provide assistance in communicating technical information to non-technical audiences (Centre for Research in Environmental Decisions, 2009; Olson, 2009; Baron, 2011).

Importantly, increasing values-based messaging does not need to include an abandonment of scientific or technical rigor within a campaign. CPAWS' glass sponge reefs campaign uses spokespeople, narratives, and use values of the environment while also having technical, scientific values that are accessible to those groups that have interest in them. All CPAWS campaigns scored in the "Other" section of the cluster analysis, where campaigns averaged between values-based and data-based attributes. These campaigns serve as a model for how to work both concepts into one campaign strategy that, like the Visionaries from our Q results, paints a vision of the world one wants to create.

With values-based campaigns, we also suggest that feedback mechanisms are more explicitly developed and implemented throughout the course of the campaign. Groups are assessing the efficacy of communications campaigns based upon their observation of content and its impacts. Without more rigorous and empirical methods of audience research, such assumptions are often inaccurate and sometimes completely wrong. A feedback structure can properly align overarching goals and objectives with the work that is carried out. This mechanism can allow greater accountability to both funders and target audiences and can assist in creating better focused messaging.

3. Funders should allow for a more collaborative approach when nonprofits request funding for a campaign. This recommendation comes in light of the

competitive environment of funding that exists for conservation campaigns and programs. There are many funders that currently follow this recommendation and follow a more collaborative model when nonprofits apply for grants. An informant from the Ecology Action Centre based out of Halifax, Nova Scotia regarded this approach as an effective way to ensure that both nonprofits and funders fulfill their own organizational values, relieving funding barriers to campaigns (Respondent 21, May 23 2013). However, many groups have noted that funding has negatively impacted their ability to complete campaign goals and objectives. SeaWeb noted that in its Too Precious to Wear campaign, funding was pulled after three years because the funder believed the campaign had 'expired' (Respondent 01, March 22 2013). We do not suggest working in isolation as the Independent Campaigners in our Q results implies. Instead of working towards hard deadlines, evaluating the campaign's current goals and objectives (and perhaps creating a new campaign based off of identified successes and barriers) may prove to further the mission and vision of all stakeholder organizations.

Our study has allowed marine conservation campaigners to understand some general trends that are occurring in the development and deployment of campaigns. These issues are likely not contained to conservation campaigning in the marine environment, but are likely also prevalent in other types of environmental advocacy campaigning. We hypothesize that concepts including flagship species, and spokespeople are also likely to have large influences on terrestrial campaigns. Additionally, we do not expect that terrestrial campaign development is much different from marine campaign development. To appropriately assess this, we suggest a comparison between marine and terrestrial campaigns should be completed. The same rationale extends to geographical location (i.e. comparison between local, national, and international campaigns). We also recommend further inquiry and applied research into values-based and data-based campaigning to determine if one (or a mixture of both) is best suited to meeting campaign goals. Considering that slightly under half of our informants did not identify their campaigns as a success, we hope our recommendations that can assist in delivering higher impact campaigns for marine environments.

References

Ban, N.C, Alidina, H.M., & Ardron, J.A. (2010). Cumulative impact mapping; Advances, relevance and limitations to marine management and conservation, using Canada's Pacific waters as a case study. *Marine Policy, 34*, 876-886.

Baum, J.K., Myers, R.A., Kehler, D.G., Worm, B., Harley, S.J., Doherty, P.A. (2003). Collapse and conservation of shark populations in the northwest Atlantic. *Science, 299*, 389–92.

Berman, T. (2011). *This crazy time: Living our Environmental Challenge*. Random House: Toronto.

Brown, S.R. (1996). Q methodology and qualitative research. *Qualitative Health Research, 6*, 561–567.

Brown, S.R. (1994). The structure and form of subjectivity in political theory and behavior. *Operant Subjectivity, 17*, 30-48.

Brown, S.R. (1989). A feeling for the organism: Understanding and interpreting political subjectivity. *Operant Subjectivity, 12*, 81-97

Brown, S.R. (1982). Imagery, mood, and the public expression of opinion. *Micropolitics, 2*, 153-173.

Brown, S.R. (1980). *Political subjectivity: Applications of Q methodology in political science.* Yale University Press.

Brown, S.R. (1974). Intensive analysis in political research. *Political Methodology, 1*, 1-25.

Carlson, J.M., Dolan, K., & McKeown, B. (1988) Popular Conceptions of Political Corruption: Implications for the Empirical Study of Political Ethics. *Corruption and Reform: An International Journal, 3*.

Center for Research on Environmental Decisions. (2009). *The Psychology of Climate Change Communication: A Guide for Scientists, Journalists, Educators, Political Aides, and the Interested Public*. New York.

Cox, R. (2006). Environmental advocacy campaigns. Chapter 7 *in Environmental communications and the public sphere.* Sage: London, UK.

Crompton, T. (2010). *Common cause: The case for working with our cultural values.* Goldaming, UK: WWF-UK.

Crowder, L.B., Hazen, E.L., Avissar, N., Bjorkland, R., Latanich, C., & Ogborn, M.B. (2008). The impact of fisheries on marine ecosystems and the transition to ecosystem-based management. *Annual Review of Ecology, Evolution and Systematics, 39*, 259-278.

Dickson, D. (2005). *The case for a 'deficit model' of science communication*. Available at http://www.scidev.net/global/communication/editorials/the-case-for-a-deficit-model-of-science-communic.html (accessed August 2013).

Dryzek, J.S. (1994). Australian discourses of democracy. *Australian Journal of Political Science, 29*, 221-223.

Fairweather, T.P., Hara, M., van der Lingen, C.D., Raakjær, J., Shannon, L.J., & Louw, G.G. (2006). A knowledge base for management of the capital-intensive fishery for small pelagic fish off South Africa. *African Journal of Marine Science, 3*, 645-660.

Fisheries & Oceans Canada (2013). *Marine Protected Areas.* Available online at http://www.dfo-mpo.gc.ca/oceans/marineareas-zonesmarines/mpa-zpm/index-eng.htm (accessed August 2013).

Favaro, B, Reynolds, J. D., and Côté, I. M. (2012). Canada's weakening aquatic protection. *Science*, *337.*

Godin, A.C. & Worm, B. (2010). Keeping the lead: How to strengthen shark conservation and management policies in Canada. *Marine Policy, 34*, 995-1001.

Groffman, P.M., Stylinski, C., Misbet, M.C., Duarte, C.M., Jordan, R., Burgin, A., … & Coloso, J. (2010). Restarting the conversation: Challenges at the interface between ecology and society. *Frontiers in Ecology and the Environment, 8*, 284-291.

Haggan, N. (2012). *Becoming indigenous: Measurable and immeasurable values in ecosystem-based management*. (Doctoral dissertation). Retrieved from Web of Science.

Halpern, B.S., Selkoe, K.A., Micheli, F., & Kappel, C.V. (2007). Evaluating and ranking the vulnerability of global marine ecosystems to anthropogenic threats. *Conservation Biology, 21*, 1301-1315.

Halpern, B.S., Walbridge, S., Selkoe, K.A., Kappel, C.V., Micheli, F., D'Agrosa, C., … & Watson, R (2008). A global map of human impact of marine ecosystems. *Science, 319*, 948-952.

Harvey, B.P., Gywnn-Jones, D., & Moore, P.J. (2013). Meta-analysis reveals complex marine biological responses to the interactive effects of ocean acidification and warming. *Ecology and Evolution, 3*, 1016-1030.

Holling, C.S. (2003). Understanding the complexity of economic, ecological, and social systems. *Ecosystems, 4*, 390-405.

Huntington, (2000). Using traditional ecological knowledge in science: Methods and applications. *Ecological Applications, 10*, 1270-1274.

Jessen, S. (2011). A review of Canada's implementation of the Oceans Act since 1997 - From leader to follower? *Coastal Management, 39*, 20-56.

Lakoff, G. (2004). *Don't think of an elephant! Know your values and frame the debate.* Chelsea Green Publishing Company: White River Junction.

McKeown B & Thomas D (1988). *Q methodology.* Sage, Newbury Park, CA.

Maechler, M., Rousseeuw, P., Struyf, A., Hubert, M., & Hornik, K. (2013). cluster: Cluster Analysis Basics and Extensions. R package version 1.14.4.

Manheim, J.B. (2011). Strategy in information and influence campaigns: How policy advocates, social movements, insurgent groups, corporations, governments and others get what they want. Routledge: New York.

Markel, M. (2004). *Technical Communication.* 7th ed. Boston: Bedford/St. Martin's.

Mattson, D.J., Byrd, K.L., Rutherford, M.B., Brown, S.R. and Clark, T.W. (2006) Finding common ground in large carnivore conservation: mapping contending perspectives. *Environmental Science and Policy, 9*, 392-405.

Moore, P. (2010). Confessions of a Greenpeace dropout: The making of a sensible environmentalist. Vancouver, BC: Beatty Street Publishing.

Oksanen, J., Guillaume Blanchet, F., Kindt, R., Pierre Legendre, P., Minchin, PR., O'Hara, R.B. … & Wagner H (2013). vegan: Community Ecology Package. R package version 2.0-8.

Olson, R. (2009). *Don't be such a scientist: Talking substance in an age of style.* Island Press: Washington, DC.

Pauly, D., Alder, J., Bennett, E., Christensen, V., Tyedmers, P., & Watson, R. (2003). The future of fisheries. *Science, 302*, 1359-1361.

Peng, Y. (1998). Democracy and Chinese political discourses. *Modern China, 24*, 408-444.

Reynolds, J.D., Côté, I. M., and Favaro, B. (2012). Canada: a bleak day for the environment. *Nature*, *487* (171).

Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin III, F.S., E. Lambin, E, … & Foley, J. (2009). Planetary boundaries: Exploring the safe operating space for humanity. *Ecology and Society, 14,* 32.

Rogers, E.M. & Storey, J.D. (1987). Communication campaigns. In C. Berger and S. Chaffee (Eds.) *Handbook of communication science.* Sage: Newbury Park, CA.

Rose, C. (2010). *How to win campaigns: Communications for change.* Washington: Earthscan.

Schmolck, P. (2013). *The PQMethod Software.* Available from http://schmolck.userweb.mwn.de/qmethod/ (accessed February 2013).

Stainton Rogers, W. (1991). *Explaining health and illness: An exploration of diversity.* Harvester Wheatsheaf: London UK.

Stark, J. & Ladell, K.W. (2008). *The International School of Marine Protected Areas Progress Report Card: Canada, Australia and the United States.* A Report by Living Oceans Society, the Sierra Club British Columbia, and the David Suzuki Foundation.

Stephenson, W. (1953). *The study of behavior: Q-technique and its methodology*. The University of Chicago Press: Chicago.

Stojanovic, T.A. & Farmer, C.J.Q. (2013). The development of world oceans & coasts and concepts of sustainability. *Marine Policy, 42*, 157-165.

Swedeen, P. (2006) Post-normal science in practice: A Q study of the potential for sustainable forestry in Washington State, USA. *Ecological Economics, 57*, 190-208.

van Exel, N.J.A. & de Graaf, G. (2005). *Q methodology: A sneak preview.* Available from www.jobvanexel.nl (accessed December 2012).

Wilson, L.A. (2007). *Influence of Policy Actors' Values on the Role of Science in US Ocean Policy: Integrating Methods for Investigating Human Dimensions Issues in Environmental Policy*. Earth System Governance: Theories and Strategies for Sustainability, Amsterdam, May 24-26 2007. URL: http://www.2007amsterdamconference.org/Downloads/AC2007_Wilson.pdf.

Worm, B., Hilborn, R., Baum, J.K., Branch, T.A., Collie, J.S., Costello, C. … & Zeller, D. (2009). Rebuilding global fisheries. *Science, 325*, 578-585.

Appendices

Appendix A. Cluster Analysis

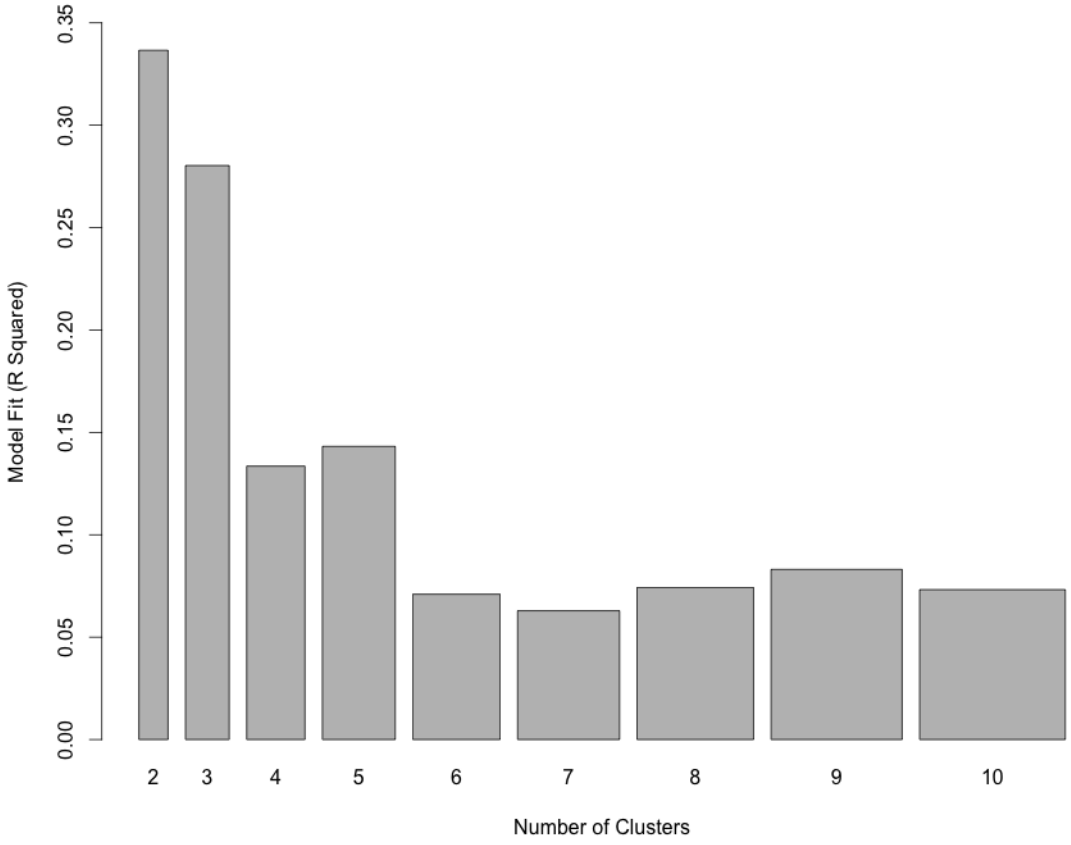

Figure A1. Hierarchical cluster analysis best-fit models for marine conservation campaign clusters. Nine scenarios (2 to 10 clusters) were compared with model 3 showing the highest support via an elbow test. R2 for 3-cluster model = 0.158.

Table A1. Mean Euclidean distances, standard deviation, and sum of squares results for each attribute per cluster. Attribute names shortened. **= P < 0.001, *** = P < 0.0001.

	Other		Data Based		Values Based		
Attribute	*Mean 1*	*St Dev 1*	*Mean 2*	*St Dev 2*	*Mean 3*	*St Dev 3*	*Sum of Squares*	
Goals	1.615	0.506	1.579	0.507	1.682	0.477	0.111	
Objectives	0.769	0.439	1.263	0.562	1.364	0.581	3.065	**
Target Audience	1.154	0.801	0.947	0.780	1.318	0.716	1.402	
Audio/Videos	0.385	0.506	0.737	0.562	0.141	0.734	9.624	***
Spokesperson	0.231	0.599	0.053	0.229	1.045	0.844	11.290	***
Flagship Species	0.615	0.768	0.789	0.787	1.591	0.666	10.151	***
Use Value	0.846	0.555	1.316	0.671	1.500	0.512	3.536	**
Ecosystem Services	1.077	0.862	0.895	0.737	1.136	0.640	0.623	
Narrative	0.308	0.630	0.632	0.597	0.682	0.780	1.241	
First Nations	0.154	0.555	0.105	0.315	0.227	0.612	0.155	
Governmental Role	0.615	0.870	1.000	0.943	1.545	0.739	7.561	**
Societal Role	1.308	0.751	1.526	0.513	1.545	0.671	0.521	
Monetary Value	0.308	0.480	0.737	0.653	0.682	0.568	1.607	
Numerical Data	0.538	0.519	1.684	0.478	1.182	0.501	10.150	***
Primary Data	0.077	0.277	1.737	0.562	0.818	0.795	22.046	***
Petition	0.462	0.776	0.263	0.562	1.727	0.631	25.258	***
Feedback	0.077	0.277	0.789	0.855	0.364	0.658	4.162	
Volunteer	0.538	0.776	0.789	0.976	0.773	0.922	0.581	

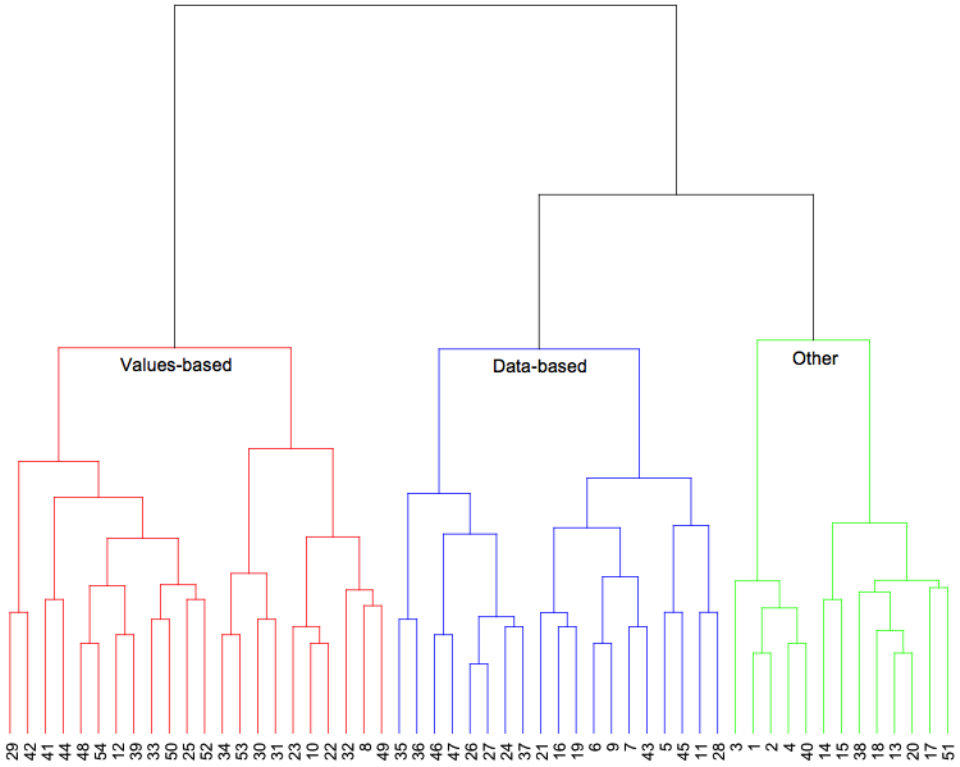

Figure A2. Hierarchical cluster analysis of marine conservation campaigns in Canada and the United States of America. Numbers correspond to individual campaigns assigned identification codes from 1 to 54. A three-cluster scenario received the strongest support (see Figure A1).

Appendix B. Interviews

Table B. List of prompting questions for interviews.

Number	Question
PART I	Goals and Objectives
1.1	From what you comprehend, how were the overarching goals and objectives of the campaign initially defined?
1.2	Who does the campaign target and what is asked of that group?
1.3	Please explain how the goals and objectives of the campaign fit into the overall mission and mandate of your organization.
1.4	Please describe if and/or how feedback is obtained throughout the campaign.
1.5	How is that information utilized afterwards?
1.6	Have the goals or objectives changed over time? If so, why did they change?
1.7	Do you feel that the campaign goals or objectives have been met (or will be met by project completion)? Why or why not?
1.8	Are there any barriers that exist within your target audience that prevent you from achieving your goals and objectives?
1.9	What are the limits to which your communications strategy can effectively create change?
PART II	Funding
2.1	How has funding impacted the definition of your goals and objectives?
PART III	Creating Change
3.1	Tell me about how this campaign uses the marine ecosystem/environment to attract your target audience to get involved.
PART VI	Post-Q Sort Questions
4.1	Which two statements, if any, were hardest to interpret?
4.2	Are you aware of any of the sources of the statements you were sorting?
4.3	Was there any concepts behind campaign development that you feel weren't covered in this activity?
4.4	In your opinion, what barriers have you faced when developing campaigns?
4.5	What has propelled your campaigns to success?

Appendix C. Q Sort Methodology

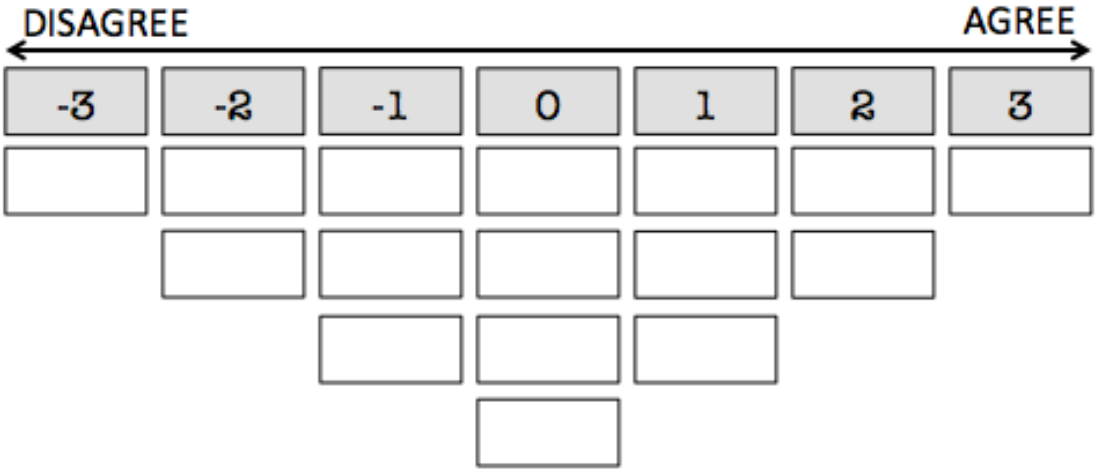

Figure C1. The Q Sort distribution.

Table C1. Comprehensive list of statements used by respondents when completing the Q sort. Asterisks indicate an indirect quote was used during the sorts; Absence of an asterisk indicates a direct quote.

	STATEMENTS	SOURCE
1	Campaigns cannot be completed by the interconnections of a small group of people.	Rogers & Story, 1987
2	The role of charismatic species is important to consider in campaign development.	N/A
3	Education and information sharing is a central theme to creating change in an environmental campaign.	N/A
4	Campaigns should operate to alter pre-existing interests in specific targets (i.e., change behaviours in the public or change policies through decision-makers).	Manheim, 2011*
5	Funding organizations must come to recognize the importance of campaign development and strengthening environmental values.	Crompton, 2010*
6	Communications campaigns are most effective when emotional (i.e., using the heart, gut, and sex appeal).	Olson, 2009
7	Environmental campaigns tend to fragment issues instead of	Crompton, 2010

	reinforcing synergies.	
8	Campaigns that use non-diplomatic language do a disservice to environmental campaigns as a whole.	Various sources in Cox, 2006
9	It is not good enough for a campaign to be clear about what it is against. You need to know what it supports.	Berman, 2011
10	Successful campaigns paint a vision of the world they want to create.	Berman, 2011
11	If you're going to campaign effectively, you have to be willing to talk to all the players and work out solutions. Otherwise, that's not campaigning, it's just complaining.	Berman, 2011
12	Campaigns dealing with hard issues should use humour to allow connection and care within people.	Berman, 2011
13	Campaigns that communicate the bottom line (i.e, their ultimate goals/objectives) with integrity, clarity, and compassion are the most respected.	Berman, 2011
14	To run great campaigns, you must analyze the power dynamics of the people you are trying to influence.	Berman, 2011
15	Campaigns are not, and cannot succeed as, collections of random acts of communication.	Rogers & Story, 1987*
16	Defining and knowing your audience is essential to a successful campaign.	Multiple sources*

Table C2. Distinguishing statements for each factor, Z Score (normalized weighted average statement score) and Q Sort Value (represents how a hypothetical respondent with 100% loading on a factor would place the statement). All listed statements have a P value < .05; * = P < .01.

Factor	Distinguishing Statements	Z Score	Q Score Value
Small Community Managers	1: Campaigns cannot be completed by the interconnections of a small group of people.	-2.09 *	-3
Serious Supporters	9: It is not good enough for a campaign to be clear about what it is against. You need to know what it supports.	1.62	3
	6: Communications campaigns are most effective when emotional (i.e., using the heart, gut, and sex appeal).	0.48	1
	7: Environmental campaigns tend to fragment issues instead of reinforcing synergies.	0.00 *	0

	3: Education and information sharing is a central theme to creating change in an environmental campaign.	-0.80 *	-1
	13: Campaigns that communicate the bottom line (i.e, their ultimate goals/objectives) with integrity, clarity, and compassion are the most respected.	-1.03 *	-2
	12: Campaigns dealing with hard issues should use humour to allow connection and care within people.	-1.71	-3
Independent Campaigners	13: Campaigns that communicate the bottom line (i.e, their ultimate goals/objectives) with integrity, clarity, and compassion are the most respected.	-0.10	0
	11: If you're going to campaign effectively, you have to be willing to talk to all the players and work out solutions. Otherwise, that's not campaigning, it's just complaining.	-1.46	-3
Visionaries	10: Successful campaigns paint a vision of the world they want to create.	2.11 *	3
	12: Campaigns dealing with hard issues should use humour to allow connection and care within people.	0.88 *	1
	16: Defining and knowing your audience is essential to a successful campaign.	-0.14	0
	14: To run great campaigns, you must analyze the power dynamics of the people you are trying to influence.	-0.75	-1
Random Communicators	15: Campaigns are not, and cannot succeed as, collections of random acts of communication.	-1.11	-3
	16: Defining and knowing your audience is essential to a successful campaign.	-1.82 *	-2

Appendix D.

Principles for Q Methodology Statement Selection

The 16 Q sort statements used in our methodology were selected based on a set of fundamental principles identified and discussed below. These statements were selected to represent the current discourse on campaign development in conservation nonprofits.

Importance of Values

The values-based approach to environmental communications is now widely preferred over the information deficit approach. A number of statements were selected to assess the extent to which values were incorporated into campaign development.

One statement was selected to reflect the importance of charismatic species in conservation campaigning (#2). Two statements were based on emotion – one on humour (#12) and one on general emotion (#6). The final statement in this grouping was selected to test the information deficit approach, as 'education and information sharing' campaigns often promote that approach (#3).

Statements in this category:

#2 The role of charismatic species is important to consider in campaign development.

#3 Education and information sharing is a central theme to creating change in an environmental campaign.

#6 Communications campaigns are most effective when emotional (i.e., using the heart, gut, and sex appeal) (Olson, 2009).

#12 Campaigns dealing with hard issues should use humour to allow connection and care within people (Berman, 2011).

Goal Development

Many statements showcased attitudes towards defining overarching goals in a campaign. Some statements related to how to communicate that goal (#13, #15) and methods that can or cannot be used to obtain that goal (#1, #4). One statement was included to reference the discourse between goals that are negatively scoped (i.e., goals that only condone a policy or action) and positively scoped (i.e. goals that show support for a cause).

Statements in this category:

#1 Campaigns cannot be completed by the interconnections of a small group of people (Rogers & Storey, 1987).

#4 Campaigns should operate to alter pre-existing interests in specific targets (i.e., change behaviours in the public or change policies through decision-makers) (Manheim, 2011).

#9 It is not good enough for a campaign to be clear about what it is against. You need to know what it supports (Berman, 2011).

#13 Campaigns that communicate the bottom line (i.e, their ultimate goals/objectives) with integrity, clarity, and compassion are the most respected (Berman, 2011).

#15 Campaigns are not, and cannot succeed as, collections of random acts of communication (Rogers & Storey, 1987).

#16 Defining and knowing your audience is essential to a successful campaign.

Campaign Tactics

These two statements reflect some tactics that some texts suggested for campaigners. One statement suggests that it is necessary to talk to all stakeholders to come to a solution (#11), while the other notes the importance of mapping the power dynamics of stakeholders within a campaign (#14).

Statements in this category:

#11 If you're going to campaign effectively, you have to be willing to talk to all the players and work out solutions. Otherwise, that's not campaigning, it's just complaining (Berman, 2011).

#14 To run great campaigns, you must analyze the power dynamics of the people you are trying to influence (Berman, 2011).

Funding Campaigns

To test the extent to which funding plays a role within marine conversation campaigns, we chose one statement that could reflect the opinions of funding in nonprofits as it relates to campaigning. The statement is an adaptation of Crompton (2010)'s recommendation to ensure that values are incorporated into the development of campaigns. His paper makes this request of nonprofits; we edited this to direct the statement towards funders.

Statement in this category:

#5 Funding organizations must come to recognize the importance of campaign development and strengthening environmental values (Crompton, 2010).

General Campaign Opinions

The final three statements in the Q sort represent overarching opinions on how campaigns are operated. One statement touches upon the issue of fragmentation within left-winged campaigns (#7) that are also discussed in Lakoff (2004). Another statement touches upon syntax used in campaigns and whether forceful language assists the environmental movement (#8). We also included one statement that provides an holistic view into what a campaign should aim to complete (#10).

Statements in this category:

#7 Environmental campaigns tend to fragment issues instead of reinforcing synergies (Crompton, 2010).

#8 Campaigns that use non-diplomatic language do a disservice to environmental campaigns as a whole (Cox, 2006).

#10 Successful campaigns paint a vision of the world they want to create (Berman, 2011).