Transposing the Conversation into Popular Idiom: The Reaction to Avatar in Hawai'i

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Traditionally, Native Hawaiians have considered nature and culture inseparable (Maly 2001). For over a thousand years, Hawaiians have studied the movements, seasons, and structure of the land. Many of today's Native Hawaiians profess a strong belief that Hawaiian culture would not exist without the land (Parion Noelani Neal, pers. comm.); however, historical events have often forcibly separated the Hawaiian people from their land (Herman 1999). In this article, we explore the perspectives of current residents of Hawai'i, both Native Hawaiians and those of other ethnicities, by analyzing their perceptions of Avatar.2 We ask these questions: After a delayed period, what messages from Avatar do viewers retain? How do perceptions of the film relate to the present culture of Hawai'i?3 Our analysis compares participants' responses along three axes: ethnicity (Native Hawaiian versus residents of other ethnicities), engagement with forests (those with relatively high and low levels of engagement with Hawaii's forests), and level of education. Although many people consider Hollywood's portrayal of these issues oversimplified and trite, our data suggest that discussion of the film can provide insight into sensitive topics that may otherwise be difficult to broach.

Historically, Hawaiian culture has exemplified a close relationship with the land, largely developed and solidified through the people's dependence on farming and fishing for their livelihoods (Kamakau 1991, 23). Historians and Native Hawaiian storytellers describe how Hawaiians' hands became stained from the brown dirt, hardened by the lava rock, and calloused by the tools they made (Kalani Flores, pers. comm.). There was "fluidity between culture and environment" (Herman 1999, 80); in this culture, the human/ecosystem relationship was an integral component of a productive lifestyle (McGregor 1996). Working with nature equalled life; nature was life (Christiano Hashimoto, pers. comm.). In traditional Hawaiian culture, there is a saying: If the land is taken care of, the land will take care of us (Kalani Flores, pers. comm.).

Today, many Native Hawaiians retain this close connection to the land and ocean (Trask 1991). The arrangement of the land has changed dramatically—for instance, a Western system of land ownership has replaced the traditional land management system, which did not conceptualize individual ownership of land (Herman 1999). But Native Hawaiians often describe their ancestors' knowledge of their natural surroundings as powerful (Andrade 2008). Connections such as these are described among indigenous cultures throughout the world (e.g., Burgess et al. 2005; Takano, Higgins, and McLaughlin 2009); for contemporary Native Hawaiians, that historical connection is equally intense and motivating. This link gives Native Hawaiians a sense of spiritual connectedness and cultural belonging, which may contribute to a contemporary Native Hawaiian sense of identity (Kehaulani E. Crawford, pers. comm.). This study is informed not only by our data but also by informal observations based on the authors' experience in the community (see the Methods section). Formal and informal observations suggest that many Native Hawaiians feel a strong connection to the land and that this connection cannot be adequately expressed with words, particularly English words.

Yet for reasons we hope to elucidate, Native Hawaiians indicated that their reflection on the film Avatar was at times helpful in explicating their feelings of connection to the land and how historical events have affected that connection. This research was spurred by pilot work conducted in January 2010, during which we explored the values associated with Hawaii's forests. At that time, we were struck by respondents' repeated and unprovoked references to Avatar; these often profound references encouraged us to explore further the feelings evoked by the film. Avatar's story addresses intense political, societal, and cultural issues. This research aimed to use the film as a vehicle for understanding more about a geography that, as many of our respondents brought to our attention in our pilot work, resonates with some of the film's principal messages.

For several reasons, the geographical, cultural, and historical aspects of Hawai'i offer a rich setting in which to explore reactions to the film. First, the archipelago's history provides a poignant parallel to the film. Hawaii's 7 vibrant, highly functioning society was taken over by colonizing powers in recent historical memory (Liliuokalani 1990; McCubbin and Marsella 2009), and that takeover was associated with the control and commercialization of land and natural resources (Levy 1975; Ralston 1984). A complex spiritual and ancestral connection with the land has been an integral part of Hawaiian culture since before the time of the takeover (Trask 1991); this intertwined political and spiritual history has formed a society sensitive to the tensions dramatized in Avatar. Second, many of the state's residents are of Native Hawaiian ancestry-360,000 individuals (approximately 30 per cent of the state population) identified themselves as at least part Native Hawaiian in the 2000 census (US Census Bureau 2010); their ancestors have lived in the Hawaiian islands for generations. Third, a recent renaissance of traditional Hawaiian culture has brought traditional beliefs, philosophies, and worldviews to the forefront (Linnekin 1983; Harden 1999; Meyer 2003). Many of these philosophies, such as that of the spirits of ancestors and deities being embodied in the non-human world (Trask 1991), have parallels in Avatar. Fourth, Hawaii's society is highly modernized and diverse; people commonly attend films and otherwise participate in popular culture events, and thus, many people in Hawai'i have been exposed to Avatar.

The relatively recent history of Hawai'i also includes a number of examples of a growing body of Native Hawaiian activists referring to tradition and cultural practices in protests of land-based action. The discourse of mālama'āina, or "care for the land," has become a common component of efforts focused on land, culture, and the intersection of the two (Linnekin 1983). For instance, there has been active and, at times, vitriolic debate on 7 Hawai'i Island over the spiritual and cultural implications of geothermal energy extraction (largely because Pele, a powerful Hawaiian deity, is the goddess of the volcano's energy) and of the construction of large telescope complexes on the summit of Mauna Kea, which is considered by many to be a sacred mountain (Zimmerman 2005). The story of Kaho'olawe, a small island that was used intensively by the US Navy for bombing practice in the late 1960s and early 1970s, provides another example of both the abuse of land and a culturally imbued protest against military control and action (Blackford 2004). These and other issues illuminate the history in Hawai'i of relating infringements on indigenous land rights to cultural practices and traditions, as was arguably done in the film Avatar.

Certain films denoting historical events have had notable impacts on societal awareness of those events. Schindler's List (1993), for example, evoked a flurry of response and reaction to the Holocaust in both popular and academic forums. Although some critiqued it as bending historical detail, many people emphasized how moving and metaphorically eyeopening the film's representation of the Holocaust was (Classen 2003). Similarly, Dances with Wolves (1990) has been discussed in scholarly work (e.g., Appleford 1995; Bovey 1993) with a mixture of appreciation for addressing issues in need of societal attention and criticism of its romanticization and simplification of native cultures. These examples suggest that the cinematic fictionalization of real-world issues can be problematic but can also generate constructive public discourse. Film and popular media scholars note that such portrayals may be particularly effective in sparking emotional responses and spurring discussion as they "open a space of possibility that achieves its impact especially by the fact that it is not identical with reality" (Classen 2003, 82). Cultural researchers such as Appleford (1995) suggest that people of indigenous heritage may appreciate cinematic representations of their culture, even if the details are inaccurate: that is, the value of presenting the idea of their worldview outweighs the damage that some contend, or fear, may be caused by inaccuracies. Building from this body of work, we investigated whether Avatar presents an opportunity to explore elusive human/nature relationships and particularly challenging post-colonial narratives even though its messages and storyline may be considered oversimplifed.

Methods

This study was conducted as a component of a larger study aimed at understanding the cultural ecosystem services, or intangible benefits provided by ecosystems (Chan et al. 2012), associated with forests in Kona (Gould, forthcoming). We conducted a mixed-methods study, using a combination of techniques to produce qualitative and quantitative data. Mixed-methods studies, which are based on the premise of triangulation (Babbie 2001), employ a variety of methods with the intention of offsetting weaknesses of individual methods with the strengths of others (Singleton, Straits, and Straits 1993). In this way, the study design can decrease the likelihood that the data reflect biases of particular data-collection strategies (Maxwell and Loomis 2002).

The study collected data through surveys, interviews, and informal observation. The majority of the surveys and interviews focused on cultural ecosystem services; questions about *Avatar* were asked near the end of both survey and interview protocols. The lead author lived in the South Kona community for six months during 2009–10, and the third author is Native Hawaiian, is from the study area, and has lived in Hawaiii her

entire life. The research team conducted surveys and interviews in Kona, Hawai'i Island, in summer 2010. The delay between the release of *Avatar* in December 2009 and our data collection allowed us to address how the film impacted respondents in the medium term. Although the delay may have hindered the ability of some participants to fully remember details of the film, we believe that the time lag strengthened our ability to explore bigger-picture issues by shifting the research focus toward sustained conceptual impact of the film. We summarize our methods below; see Gould, Ardoin, and Hashimoto (2010) for more detailed descriptions of techniques and analyses summarized here.

In-Person Survey

We conducted the surveys with a convenience sample of residents of the South Kona area. We worked in public places (parks and grocery stores) and solicited the participation of passersby. Given that much of the survey's content referenced upland forests, we recruited people to complete the survey by asking, "Would you be willing to share your thoughts about mauka [upland] Kona?" Therefore, although the survey sample was not random, the recruitment verbiage was neutral to perceptions of the film Avatar. The average respondent required twenty-three minutes to complete the survey. A total of 205 individuals completed the survey (124 male, 80 female, one unidentified). Ages ranged from eighteen to eighty-one, with an average of forty-six. The Avatar section of the survey comprised thirteen questions. Eleven questions used to produce quantitative data (see table 1) assessed opinions of the film and its messages and the degree to which the film inspired specific emotions in people. All but the last two questions produced quantitative data. The two final questions requested more general thoughts on the film and its message, producing qualitative data (see table 1).

Interviews

In addition to the highly structured surveys, the research team conducted twenty-one semi-structured interviews. The interview sample was purposefully selected to represent a diversity of relationships with Hawaii's forests. The interview sample included fourteen males and seven females with ages ranging from thirty-four to seventy-four years. Like the surveys, interviews covered topics related to uses of and values pertaining to Hawaii's upland forests, and respondents were recruited without mention of *Avatar*. Interviews lasted from one and a half to four hours. *Avatar* was discussed at the end of each interview. The interview guide included four topics regarding the film: (1) what the respondent thought of the film, (2) the film's main messages, (3) whether the film related to the previous discussion about

cultural ecosystem services, and (4) whether the respondent was glad that the film addressed the topics it did.

Data Analysis

We analyzed the qualitative and quantitative data concurrently, using themes emerging from each technique to guide our exploration of the other (Maxwell 2005). In both the quantitative and qualitative analyses, we catalogued and summarized various perceptions of the film and then asked whether those perceptions differed among people with a range of ethnic backgrounds, levels of education, and degree of involvement with the forest. Throughout this paper, to increase clarity, we describe respondents using the ethnicity with which they indicated that they "most identified," even though this simplifies ethnic heritage.

We digitally recorded and transcribed interviews. We analyzed qualitative data—from interviews as well as from the two open-ended questions on the survey—using a thematic coding scheme.

Our quantitative analyses explored respondent *opinions* of the film on three levels. (See table 1; hereafter, we label these "opinion" questions.) Quantitative analyses also explored six *emotions* that respondents may have felt in response to the film. (See table 1; hereafter, we label these "emotion" questions.) We analyzed how these responses related to the three primary demographic axes: ethnicity, level of education, and level of involvement with forest (a constructed scale). Because the data from our five-point scale are ordinal, and the distances between the points are arbitrary, we used the Wilcoxon-Mann-Whitney test (Mann and Whitney 1947; Wilcoxon 1945) to examine possible relationships between responses and demographic characteristics.

Results and Discussion

Of the 205 respondents who completed the survey, 125 (61 per cent) had seen the film *Avatar*. Of the 70 individuals who had not seen it, 24 (12 per cent of the total sample) had heard enough discussion of it that they felt qualified to answer questions related to it. Therefore, 149 survey respondents answered the questions about *Avatar*. Of the 21 in-depth interviewees, 15 had seen the film; all "interview" responses below are from these \$\mathcal{L}\$ 15 individuals.

Emotions and Opinions Related to the Film

Preliminary statistical analyses of the quantitative data revealed four significant differences. However, when the Bonferroni correction was applied to account for the high number of relationships tested, none of these results

TABLE 1: SURVEY ITEMS

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Question category	Question	N	Response mean ^a	Response standard deviation
Opinion	Overall, how much did you like the movie?b	147	(4.3)	0.9
Opinion	How much did you like the special effects?	147	4.5	0.8
Opinion	How much did you like the story?	144	4.0	1.1
Message agreement	How much do you agree with the first message you gave?	130	4.6	0.9
Message agreement	How much do you agree with the second message you gave?	106	4.5	1.0
Please rate	on the 1–5 scale how <i>Avatar</i> created (or didn't c	reate) the	following emo	tions for you
Emotions	Angry	132	2.9	1.5
Emotions	Disgusted	133	2.8	1.6
Emotions	Frustrated	134	2.9	1.5
Emotions	Hopeful	134	(3.6)	1.4
Emotions	Proud	128	2.8	1.6
Emotions	Spiritual	132	(3.6)	1.5
Messages	What do you think were the main messages of the movie – what was the movie trying to say to us?		n/a	n/a
Other thoughts	Is there anything else you would like to say about the movie and/or your reaction to it, or to what others have said about it?		n/a	n/a

a Quantitative responses were scored using a five-point Likert scale where "1" indicates the negative response (negative or "not at all") and "5" indicates the positive response (positive or "most definitely").

remained significant.⁵ Thus, we report these results as suggestive rather than as statistically significant.

In the "emotion" questions, we asked respondents to rank the degree to which the film inspired in them the feeling of six emotions: angry, disgusted, frustrated, hopeful, proud, and spiritual. We found four patterns in these answers. (See table 2 for the complete results.) First, respondents who identified as Native Hawaiian were more likely than those who

b For respondents who had not seen the film but felt qualified to answer questions about it, the survey administrator replaced the word "you" with "people you've talked to" for all questions.

TABLE 2: TEST STATISTICS FOR MANN-WHITNEY TESTS COMPARING RESPONDENT GROUPS

Emotions elicited as re	ported by Nativ	e Hawaiian and v	white respondents		
	Angry	Disgusted	Frustrated	Hopeful	
Mean (std dev) 3.1 (1.7) Native Hawaiian		2.9 (1.6)	2.9 (1.6)	3.6 (1.5)	
Mean (std dev) white	3.0 (1.4)	2.7 (1.6)	2.8 (1.5)	3.5 (1.3)	
Mann-Whitney U	1039	1007	1033	1035	
Zª	32	79	63	61	
Significance (2-tailed)	.751	.428	.530	.539	
Emotions elicited as re	eported by resp	ondents with high	ner and lower levels	of engagement	
	Angry	Disgusted	Frustrated	Hopeful	
Mean (std dev) 3.3 (1.6) higher engagement		3.0 (1.7)	3.3 (1.5)	3.6 (1.4)	
Mean (std dev) lower engagement	•		2.5 (1.5)	3.6 (1.4)	
Mann-Whitney U	1757	2056	1677	2360	
Z^a	-2.57	-1.42	-3.17	21	
Significance (2-tailed)	.010	.157	.002	.831	
Emotions elicited as re	eported by resp	ondents with high	her and lower educ	ation levels	
	Angry	Disgusted	Frustrated	Hopeful	
Mean (std dev) lower education	3.0 (1.5)	2.9 (1.7)	3.3 (1.5)	3.5 (1.4)	
Mean (std dev) higher education	2.8 (1.6)	2.7 (1.6)	2.6 (1.5)	3.6 (1.3)	
Mann-Whitney U	2174	2170	1768	2289	
$\mathbf{Z}^{\mathbf{a}}$	52	67	-2.59	31	
Significance (2-tailed)	.602	.503	.009	.754	

a The Z-statistic can be interpreted similarly to the t-statistic; Z-values greater than 1.96 indicate significance at the 0.05 level and Z-values greater than 2.58 indicate significance at the 0.01 level. The significance level is an estimation of confidence that a difference like the one in our data would occur by chance alone; for example, a significance value of 0.002 indicates a 0.2 per cent chance that the difference in ratings between two groups would have occurred by chance. Results significant at the 0.05 level (before Bonferroni correction) are bolded.

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Proud	Spiritual	Liked overall	Liked plot	Liked special effects
3.3 (1.7)	3.6 (1.5)	4.2 (0.9)	4.0 (1.1)	4.5 (0.7)
2.5 (1.5)	3.5 (1.4)	4.3 (0.8)	3.9 (1.0)	4.5 (0.7)
715	981	1329	1205	1271
-2.18	55	08	66	52
.029	.582	.939	.507	.605
Proud	Spiritual	Liked overall	Liked plot	Liked special effects
3.1 (1.7)	3.8 (1.6)	4.2 (1.0)	4.0 (1.1)	4.4 (0.8)
2.6 (1.6)	3.6 (1.4)	4.3 (0.9)	4.0 (1.0)	4.5 (0.7)
1948	2198	2795	2698	2770
-1.33	79	34	30	47
.183	.428	.732	.765	.639
		•		
Proud	Spiritual	Liked overall	Liked plot	Liked special effects
2.8 (1.6)	3.5 (1.4)	4.3 (0.9)	3.9 (1.0)	4.4 (0.8)
2.9 (1.7)	3.8 (1.5)	4.2 (0.9)	4.1 (1.1)	4.5 (0.7)
2126	2030	2773	2299	2671
32	-1.31	22	-1.71	67
.748	.191	.823	.088	.501

identified as Caucasian/white to report that the film made them feel proud (p < 0.05 before Bonferroni correction; Mann-Wilcoxon-Whitney test, U=715, Z=2.18). This finding is consistent with past work on societal perceptions of films (e.g., Appleford 1995) as well as with findings from our qualitative data; our qualitative work suggested that people of indigenous descent more frequently expressed a sense of pride related to the film's story than those without a genealogical connection to the pro-indigenous messages in the film.

Past interaction with Hawaii's forest also may have affected people's reactions to the film. Respondents with a higher degree of engagement with the forest reported higher levels of frustration (p < 0.05 before Bonferroni correction; Mann-Wilcoxon-Whitney test, U=1768, Z=2.60) and higher levels of anger (p < 0.05 before Bonferroni correction; Mann-Wilcoxon-Whitney test, U=1757, Z=2.57) than those with less engagement with the forest. This result may suggest that respondents with higher levels of interaction with the forest may have higher levels of emotional connection with that ecosystem; therefore, the forest-exploitation aspect of the film may have spurred more anger and frustration among those respondents than among those who rarely interact with the forest.

In addition, respondents with lower levels of education (no formal education, grade school, middle school, or high school) reported stronger feelings of frustration than those with higher levels of education (community college, four-year degree, or graduate degree) (p < 0.05 before Bonferroni correction; Mann-Wilcoxon-Whitney test, U=1587, Z=2.378).6 A straightforward rationale for this result is not obvious, but it may stem from those with higher education levels having more exposure to critical analysis, which is often emphasized in higher education. Perhaps those respondents would be less frustrated by the short-sightedness portrayed by the film's characters than would those who are less familiar with the rhetorical devices commonly used in artistic works. Additional qualitative data probing why individuals rated each emotion as they did, which we did not collect, would be helpful in further illuminating the reasoning behind their responses.

We found no significant differences in the three "opinion" responses (see table 1) when respondents were compared along the three demographic axes.

Messages of the Film

Collectively, survey respondents provided 242 messages from the film.⁷ The messages were diverse and nuanced. (Table 3 provides a selection of responses representative of the more common subcategories.) In present-

ing our results, we often highlight ethnicity of respondents (see table 3) because this is often an important distinction in the Hawaiian context and since this axis provided interesting comparisons in a number of cases.

Table 3 presents an overview of selected responses to the questions about the film's main messages. In the "#" column, we indicate the number of survey respondents who identified the message, and the next four columns report percentages describing the division of that small pool of respondents by ethnicity. However, because this question was free-response, these quantitative results cannot be seen as representative of the population and thus are only included as description.

Joint analyses of the survey and interview data sets revealed four overarching themes. These themes emerged from combined qualitative data from surveys and interviews.

1. Respecting the land and the people who live on the land

When asked about the messages of the film, the majority of respondents discussed some variant of a theme that we categorized as "Take care of nature." Of the 242 messages provided in surveys, 103 (43%) were coded in the main category of "Take care of nature." Although this may in part be due to the previous content of the survey, which was related to Hawaii's forests, it nevertheless indicates that many respondents considered the film to have an "environmental" message.

Thirty-nine of the "Take care of nature" responses (16% of all messages provided) were coded as "Preserve nature and save environment" or "Take care of the life of the forest"; people of diverse ethnic backgrounds gave these responses. Examples of "Preserve nature and save environment" include "conserve the forest" and "have to save the environment." An example of the "Take care of the life of the forest" subcategory is one respondent's statement that "we tend to use forests as a resource just for our needs, but we tend to forget that other creatures... have their own needs. We have a responsibility to restore their environment if we damage it."

In addition to these responses related to "nature" overall, eight respondents (5% of the 149 survey respondents who answered questions about Avatar) specifically mentioned nature and people jointly. For instance, one Native Hawaiian respondent gave as a message of the film "respect each culture: land, resources, environment, people." Another Native Hawaiian respondent represented the concept of conserving both nature and culture by combining two negatively phrased messages: "subjugation of another culture" and "destruction of another rainforest." Similarly, ten respondents (7%) provided messages that were coded as "humans lose if take down forest." These messages—such as one Native Hawaiian respondent's a

Cotomologic			D4I.	• • • • •			
Categories and Number of Responses			ļ				
Main category	Subcategory	#	Native Hawaiian	White	Other indigenous	All other ^a	Example
Composition of sample (for ref	of <i>Avatar</i> survey Ference)		27%	45%	9%	19%	,
Take care of nature ^b	Preserve nature and save environment	33	36%	39%	9%	15%	"not destroy nature"
Culture	Connection to land	11	30%	60%	0%	0%	"importance of connection with our plant brothers"
Indigenous rights	Anti- subjugation of natives	10	20%	30%	40%	10%	"Indigenous people don't need saving by white people."
Preserve nature	Humans lose if take down forest	10	50%	30%	0%	20%	"Care for the earth, you are caring for yourself."
Take care of nature	Mother Nature	9	22%	22%	33%	22%	"The land is living. Mother Nature is a human being too."
Human nature	People are evil, destructive, greedy	9	11% .	67%	11%	11%	"people's greediness, selfishness, stupidity"
Culture	Respect culture	8	50%	25%	13%	13%	"appreciate culture and why certain thing are done that way"
Human nature	Exploitation for personal gain or profit	7	29%	43%	14%	14%	"how we can destroy our earth all for profit, and it's easy to lose a whole culture in the process"

TABLE 3, continued

Categories and Number of Responses			Ethnicity				
Main category	Subcategory	#	Native Hawaiian	White	Other indigenous	All other	Example
Composition of Avatar survey sample (for reference)		27%	45%	9%	19%	L,	
Lessons	Understanding others	7	14%	71%	14%	0%	"importance of communication between cultures"
Real world	Could and does happen anywhere		50%	17%		17%	"The movie speaks the truth a little bit — but just in alien form; they didn't want to use humans because of media and stuff."
Spiritual	Animism	6	67%	0%	0%	17%	"All natural things have a soul."
Human nature	Transcending Race	5	40%	40%	0%	20%	"Tolerate people who look different."
Preserve nature	Balance ·	4	. 25%	75%	0%		"Preserve our forest because it plays important part in the balance of life."
Preserve nature	All connected	4	25%	50%	0%		"Earth and people are connected."
Real world	Military is bad	4	0%	75%	0%		"The military is bad."
Corporations	Corporations hurting environment	3	33%	67%	0%		"Evil corporations can take over and rape the land."

TABLE 3, continued

Categories and Number of Responses			· Ethnicity				_
Main category	Subcategory	#	Native Hawaiian	White	Other indigenous	All other	Example
Composition of Avatar survey sample (for reference)		27%	45%	9%	19%		
Corporations	Corporations defiling natives	3		33%	33%	33%	"If the indigenous people have something that the industrial complex wants, it will take it."
Lessons	Cannot take what's not yours	2	0%	50%	0%	50%	"not to take advantage of other planets, situations, or things we are not entitled to"
No message or don't Remember	Liked special effects	2	50%	50%	0%	0%	"I don't think I was looking for a message; it was fun and had good special effects."
Spiritual	Connection between land and spirit	2	0%	0%	100%	0%	"Humanity needs to reconnect with the natural world because the unnatural world does not support us spiritually; and people who are conscious of that tend to be more socially responsible."

a Rows are ordered based upon the number of responses in each sub-category (the "#" column). Percentages do not always add up to 100 per cent because of rounding errors and some respondents' refusal to provide ethnicity. Readers interested in the complete list of responses may contact the lead author.

statement that "we cannot survive without resources, nature; we cannot duplicate nature, no matter the technology"—reflected the basic idea of ecosystem services: that ecosystems provide humans with essential benefits. Half of the responses in this category came from Native Hawaiians, perhaps partly because of the cultural orientation described above, which suggests a reciprocal relationship between land and people.

The two main film themes described by a white male in his fifties, who is a long-time island resident active in Hawaiian affairs, summarized the idea of the intertwined responsibility for people and nature: "Mālama [take care of] the 'aina [the land, literally "that which feeds"]. Malama the people on the 'āina. That's probably it."

2. Link between people and land

One of the frequently mentioned concepts most salient to this exploration was the intensity of the Native Hawaiian connection to the land. Many respondents noted its similarity to the relationship between the Na'vi and the land of Pandora.

In the surveys, eleven respondents (7%) provided messages that were coded as "Culture: Connection to land," a category exemplified by one Native Hawaiian respondent's message that "they [the Na'vi] were trying to protect their culture and the 'tree of life.'" Respondents providing these "Connection to land" messages were ethnically diverse; one white respondent mentioned "people's emotional ties to the forest," while another white respondent said that the film taught us about "what you're able to draw from the land and forest, if you're close to it, spiritually."

In contrast to the diversity of the "Connection to land" category, it is interesting to note that of the six messages that were coded as "Spiritual: Animism," four came from Native Hawaiian respondents, one from a Chinese/Japanese individual whose family has lived in Hawai'i for "generations," and one from a respondent who refused to provide ethnicity. As \triangle examples of this category, three Native Hawaiian respondents described messages from the film as "plants have feelings, and everything revolves around the forest," "all natural things have a soul," and "the forest is a living thing—you must respect it."

Two respondents provided messages addressing the spiritual nature 1 of the human-land connection (categorized as "Spiritual: Connection between land and spirit"); again notably, both of the responses in this coding category came from people of indigenous descent, although not, in this case, Native Hawaiian heritage. A Native American respondent said that one of the film's messages was a "connection between land and spirit." One respondent of Māori heritage (the indigenous people of New Zealand) gave

b Of the ethnicity category described as "All other," 53 per cent comprised people of three ethnicities common in Hawai'i: Filipino, Chinese, and Japanese.

this as a message: "Humanity needs to reconnect with the natural world because the unnatural world does not support us spiritually, and people who are conscious of that tend to be more socially responsible. We need the forest."

Interviewees detailed some of the ideas expressed in the surveys. One Native Hawaiian in his fifties said, "I could relate to the blue guys [the Na'vi]." When asked why, he responded with a statement about the poorly understood meaning of natural features: "Ah, about people just coming in, and just building things, and knocking things down. And not understanding what that shoreline, or that hill, means. And just, 'I'm gonna do my subdivision."

One Native Hawaiian respondent in his thirties expressed similar ideas related to the depth of meaning that can be associated with land and the features on it. He explicitly made a connection between that depth of meaning and indigeneity, or perhaps longevity of tenure in a place: "All aboriginal people, people who have identified themselves with a place, or have evolved with a place, probably felt the same, or have similar feelings... that land, that tree was their mother. I mean, that was part of their existence.... Their symbiosis between the forest and that culture, or that people, was so close that they'd die. They just, [pause] they would have died if that forest was gone."

Two white male respondents, both in their early sixties, suggested that the connection that the Na'vi have with their ecosystem is an appealing but unrealistic idea. The words of these two individuals in the two quotations that follow reveal the striking similarity of their comments:

I'm sympathetic with the views that the story portrayed.... I certainly am attracted to the idea that there is a more perfect relationship between humans, or some kind of human-like things, and the forest. You know, that there's a way that they live together in wonderful [pause] and I think it's sort of a fantasy, but it's a nice fantasy.

You have a people that seem to be very plugged into their environment and physically plugged into other species, I mean you can tell me how that can possibly evolve [laughing]. But, so some of it is unrealistic, but they are obviously a people that are very guided and that idea has a lot of appeal. I'm not sure it's quite so realistic.

However, respondents with Native Hawaiian ancestry did not see the Na'vi connection as far-fetched. Two interviewees powerfully expressed their thoughts using noticeably similar language. One respondent suggested that people with backgrounds different from his might not understand the connection.

And I think maybe that's why I connected with... that movie, 'cause when I saw them communicating with the plants, I knew *exactly* what they were doing. And it's, for me, it's *not* an animated thing for me. When I saw them understanding their plants, I said, "I know what they're talking about."... Which kinda surprised me—that some guy in Hollywood would understand that. I thought that was kinda cool. (Native Hawaiian male, late fifties)

I guess one thing for me is the connection to the forest, and learning from the forest, and quote "talking to the trees," that's not something that's at all strange to me, in that movie. I have no idea what other people think...they'd think, "Oh, that's far-fetched," or "that's fantastic," or that's, you know, "living in a fantasy world." That wasn't a stretch for me. (Native Hawaiian male, mid-thirties).

3. People hold diverse perspectives, but underlying human tendencies exist. Another common theme, which builds upon the preceding theme of the link between people and land, was the need to recognize and respect diversity in cultures and perspectives. Conceptually intertwined with comments on this diversity of perspectives, however, was a message that human beings share certain innate qualities: on the one hand, an affinity for "nature," and on the other, greediness, destructiveness, and pursuit of profit.

Many survey respondents provided variants on the idea of respecting different cultures and backgrounds. Eight responses (representing 5% of respondents) were related to the need to "respect culture" (these were categorized as "Culture: Respect culture"). We coded comments regarding understanding and respecting a diversity of perspectives as "Lessons: Understanding others" (7 respondents, 5%) and "Human nature: Transcending race" (5 respondents, 3%). One Native Hawaiian respondent listed two messages that succinctly encompass many of the messages in two of these categories. His first message, which reflected the eight messages coded as "Respect culture," was "the importance of keeping a culture alive." He represented the "Understanding others" subcategory with his second message: "the importance of communication between cultures."

For seven of the fifteen interviewees who had seen Avatar, the film evoked comments about different perceptions of the world. These comments often suggested that differences in perception correspond with differences in ethnic background and that awareness and effort are needed to increase understanding of those differences. For example, a white respondent in her sixties said: "It's true that Native Hawaiians are very spiritual, very linked to the land.... The mining people [in the movie] had a sense of entitlement. It's the same problem with people [who come to Hawai'i] from the mainland. They think: our way is right, and your way

is superstitious. While on the mainland, there's a big separation between religion and culture, the Hawaiian can't separate religion and culture. There is a total lack of respect with the Western coming in; they don't get that the 'āina [land] is a living, breathing thing." Although this woman could also be considered a "Westerner" from the mainland, her comments throughout the interview suggested that her many years on the island, combined with her study of Native Hawaiian perspectives and active involvement in community affairs, may have added to a perspective atypical of newcomers.

Another respondent, a Native Hawaiian woman in her late fifties, provided nuanced reflection on the different relationships to the environment portrayed in the film. In her view, "the two main [messages] were that if you're disconnected you're going to behave badly, and if you're connected you won't." However, in concordance with the implication of the white woman's quote directly above, she doesn't view "connectedness" as a static, pre-determined state. Previously in the interview, she had discussed the need to recognize that everyone and everything is a part of the "whole" and that dividing ourselves along so many lines is ultimately unhelpful. In reference to *Avatar*, she said: "I think that people from the disconnected group were able to join the connected group is an important message, but there again, it misses the mark that we've talked about, that even the disconnected guys are part of the whole.... The us- and them-ness was perpetuated. So, that would be my concern, is that it perpetuates the notion that we cannot become whole."

Likewise, Appleford (1995, 100) suggests that films such as Dances with Wolves perpetuate an "otherness" that leaves intact "the ideological division between Self and Other, white and Indian." Our results are consistent with Appleford's critique: many of our respondents, such as the woman quoted above, did not feel that the connection to the natural world—or the lack thereof—was limited to people of any particular ethnic background. Instead, a number of survey and interview respondents implied the existence of innate human propensities. Many respondents spoke of the underlying human affinity for the "natural" world in ways that resemble E. O. Wilson's notion of "biophilia" (Wilson 1984). For instance, one white interviewee in his fifties commented about the reason for the film's success: "The popularity of the movie had to indicate that people weren't there looking at the special effects; they're interested in the message.... A lot of people have seen that movie one, two, three, four times.... All the greenery that shows there, and [writer/director James Cameron's] depiction of how a human can integrate, or a being can integrate themselves into a natural environment...that's soothing to the viewer's soul to see that, and it wasn't any, you know, grand story."

Similarly, some respondents discussed the negative aspects of human behaviour without reference to ethnic differences. Nine survey respondents (6%) made statements about what they considered to be innate human greediness: for instance, "people's greediness, selfishness, stupidity," "humans are evil," and "humans in general are pretty destructive." Seven respondents (5%) made statements that we coded as "Human nature: Exploitation for personal gain or profit," stressing the human propensity to pursue profit. None of these respondents connected these characteristics to ethnicity; rather, respondents mentioned them more as general statements about the human condition. To emphasize this point, some interviewees explicitly stated that greedy and destructive behaviour is not connected with ethnicity. For instance, a white respondent in his early thirties said: "I don't wanna say it's white man, because I think that even the Hawaiian, Inuit, or whoever else around the world can still have those drives to do those bad things, you know, and destroy things."

4. Portraying the plight of native peoples worldwide, and particularly the history of Hawai'i

The final emergent theme was the mistreatment of native peoples around the world and, specifically, in Hawai'i. In the survey, ten respondents (7%) provided messages that we coded as "Indigenous rights: Anti-subjugation of natives." These messages were expressed in diverse ways and by people of many ethnic backgrounds (see table 3). A Native American respondent, for example, described one of the film's messages as being that "indigenous wisdom and tradition should be honoured at all costs," and a Hispanic respondent stated a similar idea: "leave indigenous people alone." A white respondent expressed the same idea with ironic sarcasm: "the people [Na'vi] shouldn't worry about it, because eventually they'll get casinos like the Indians."

When describing the film's messages, six respondents (4%) expressed statements along the line that this abuse "could and does happen anywhere." Three of these six comments were made by Native Hawaiians and one by a Native American respondent who stated that the film "delved into tribal tradition as a whole—not just in Hawai'i—and a lot of the crises they've dealt with."

Four survey respondents referenced the universality of the phenomenon of domination of native people but specifically mentioned that the situation portrayed in the film mirrored the story of Hawai'i. One of these four said, "You can see how the *haoles* [common parlance in Hawai'i for white people] do it to everyone—the Hawaiians, Indians. Egyptians did it to South Africans, the British did it to Hawaiians, etc."

Of the fifteen interviewees who had seen Avatar, nine discussed the similarity of the film's story and Hawaii's story, and many referenced the global nature of the problem. Although two interviewees (one Native Hawaiian and one white) commented that the film portrayed a highly clichéd indigenous society, both nevertheless contended that the film addressed deep and important topics. One interviewee—a Native Hawaiian man in his thirties—described the impact of the modern world on traditional cultures in general and in Hawaiian culture in particular, in this way:

I think the movie was really trying to say that in certain areas of this world, if this world keeps going down the track that it's going, people will [pause], will die. And maybe not physically [pause], but Hawaiians will not be called Hawaiians anymore. They'd be a thing of the past. Um, we'd evolve into something else. Our names would be lost. That whole culture would be gone. And, and I think if it hasn't happened, it's probably happening already—um, to other cultures. They've just completely lost their cultural practices.

In a similar way, a white woman in her sixties described the congruence between the film's plot and the situation in Hawai'i, along with the global nature of the scenario:

It was about special interests wanting resources, wanting to take down that tree that was in the way of the resources. We have that same situation here.... It was very obvious in the movie: it didn't matter what they [the Na'vi] did or felt.... They [Avatar's creators] came to Hawai'i and they took our story. But it's not a unique story; it's what the Western world did to the Native Americans on the mainland, too. It happened all over.

Discussing the film led a Native Hawaiian in his fifties, as well, to explain Hawaii's statehood in grim terms:

Well, that's why Hawai'i is part of the United States—because "the natives didn't deserve this place. They just don't know how to maximize the return on it. They're just squandering it away. So let's take it from 'em, turn it into this prosperous place. And if they die, so what?"

In another sweeping comment, a Native Hawaiian respondent in his mid-thirties encompassed many of the messages discussed above—the message of differing views of land, that of the Native Hawaiian link to the land, and that of the symbolic relevance of the film to the situation in Kona, Hawai'i:

I think there are a lot of the newcomers here...want to come here and "we want to learn to dance hula, and want to mālama 'āina"...but I don't know if they truly get it.... The movie might be sort of symbolic of some

of the challenges facing Kona, and especially Kona because the population is shifting to a very Caucasian population.... That is a challenge of just a different perspective and outlook of what the forest is—some place to be accessed, and some place to be able to go hiking and to do whatever you want, and to take pictures of birds, or to do this thing. Then it's a whole different outlook on it; it's not a genealogical connection. They don't come from that place. It's sort of: this is America, and we can access wherever we want.... There's no idea or thought that this is where I come from ... this is who I am, this is where I'm born from. It's a completely different outlook.

This response touches on profound issues related to perception of land and the gravity involved in combining differing perceptions, with specific reference to the situation in contemporary Hawai'i. The respondent raises issues central to study of values related to forest, and the context of *Avatar*'s storyline seems to have encouraged formulation of this potentially controversial message.

Connection of Themes to Other Scholarly Work

This study's four emergent themes, which are detailed above, are consistent with scholarly works addressing similar issues. The theme of respecting the land and the people associated with it is being explored in a number of academic realms (Chan et al. 2007; Khan and Bhagwat 2010; Adams et al. 2004). A large and diverse body of literature addresses a second theme: the spiritual and cultural dimensions of the link between people and land (e.g., Herman 1999; Maly 2001). A third theme—the diversity of perspectives of different peoples with respect to land—is similarly addressed both explicitly and implicitly in a variety of fields (Berghoefer, Rozzi, and Jax 2010; White 1967). The tragic but common subjugation of native peoples, which emerged as a fourth theme, is discussed by scholars with respect to native peoples worldwide (Pulver and Fitzpatrick 2008) and specifically in Hawai'i (Trask 1991; McCubbin and Marsella 2009).

Connection to Cultural Ecosystem Services

As was described above, this study was part of a larger project investigating the cultural ecosystem services (CES) associated with Hawaii's forests. When interview respondents were asked if the discussion of *Avatar* related to the preceding discussion of CES (which constituted the bulk of their interviews), all but one of the respondents saw a connection.

The CES concept deals with the intangible benefits that ecosystems provide to people, although it is important to note that CES analysts do not necessarily attempt to monetize those benefits, as do many other ecosystem services analysts (e.g., Fisher et al. 2008). A CES analysis attempts

to characterize connections between ecosystems and humans that are difficult to define, and often even more difficult to quantify or encapsulate—connections related to, for instance, spirituality, aesthetics, sense of identity, and cultural heritage.

For many scholars, intuition and experience demonstrate the depth and interdependence of connections between nature ("ecosystems"), spirituality, and culture. It is often unclear, however, how to approach and characterize these connections such that they are appropriately included in a decision-making sphere. The development of methods to adequately study and portray this connection is the subject of much research and thought (e.g., Chan et al. 2012). Given that CES research addresses the connections between ecosystems and topics such as spirituality and cultural heritage, the story of the Na'vi, with their tree-based deity who protects and nurtures the ancestors, provides a fictional setting for discussions related to CES. For instance, the Native Hawaiian in his mid-thirties mentioned above said: "[Avatar's story] relates to identity...it relates to the ecosystem. Well, they're kinda one and the same. For me, anyway, the ecosystem is what has made my identity, is what has made me who I am." This statement, precipitated by reflecting on the film, is closely aligned with theoretical concepts related to CES (such as the notion that ecosystems can contribute to the formation and maintenance of people's sense of identity). Our study, exemplified by reflections such as this respondent's, suggests that representing issues through artistic and cultural mechanisms such as film may provide a conceptual platform that facilitates discussion of these interconnections.

Popular Media and Societal Beliefs and Practices

Many survey and interview responses expressed doubt that viewers of Avatar would retain the "deeper messages" of the film. However, our survey data indicate that the vast majority of people (n = 143, 96% of the 149 survey respondents who answered questions about Avatar) were able to identify moral messages from the film months after viewing it. A middleaged male interview respondent, who called himself "Japanese on paper but Hawaiian at heart," said, "I think a lot of people... from Hawai'i got that message," by which he meant the message of how it's wrong to change "a whole society... because of what you need or want." The implication of his comment is that in a place like Hawai'i, where some of the film's messages closely reflect historical and contemporary events, those messages are especially salient. The data reported here support his statement.

Many of our respondents indicated that they were deeply passionate about the basic issues that they felt the film addressed—issues such as

indigenous rights and the spiritual connection between people and land. To explore further the respondents' opinions about the film's treatment of such topics during the interviews, we explicitly asked respondents: "Are you glad that the movie addressed the issues it did?" A few interviewees expressed disappointment about how the film addressed certain social issues: for instance, respondents suggested that the film's treatment of indigenous rights was a cliché, its treatment of spirituality superficial, and its portrayal of anti-colonialism violent. However, all interviewees suggested that they were glad the film had addressed the issues that it did. One white male in his fifties called it "a statement in a movie form." A Native Hawaiian in her fifties described her appreciation by saying: "I think it translates, or transposes, the conversation into popular idiom. So it can be a good springboard for discussion with a variety of age ranges and economic backgrounds, and geographic backgrounds." Again, our data support this respondent's claim.

Interviewees noted the significance of the opportunity of using a block-buster film as a springboard for discussion of issues such as indigenous rights and post-colonialism. Two Native Hawaiian interviewees remarked that the presence of *Avatar*'s plotline in a blockbuster film may be a marker of societal change. One said that the film and its success "signal a different time we're in." The other stated, "When I was growing up, I just don't think [this kind of movie] would have been made." Both of these respondents indicated that the anti-imperialist, pro-indigenous sentiment in the movie would not have been socially acceptable even twenty years ago. Survey respondents also expressed appreciation for the film's messages: when asked for additional thoughts on *Avatar*, 15 of 149 respondents (10%) indicated that the film had an important or appealing message. As one respondent said, "I am heartened that it seems that many people did hear what the theme was, even though times are dark."

Three interviewees were skeptical, however, regarding the possibility that the film would precipitate positive changes in the world. One referred to *Avatar* as "just a movie." But another respondent who doubted that the film would spur massive change thoughtfully noted, "Very seldom in human history does one thing make a difference. It's a series of events over a period of time that has attitudes evolve. This is just one."

Conclusion

This study was limited in a number of ways. First, our respondent pool was a non-random survey sample. Second, our sample size was not large enough to demonstrate statistically significant quantitative results. We also had an underrepresentation of women in the interview sample.

Despite these limitations, our findings provide insight into the reception of Avatar in Hawai'i and ideas for further research. First, our quantitative data suggest that people of different backgrounds had different emotional responses to the film; these data thus lay groundwork for future research into the variegated societal response to powerful films and the implications of those varied responses. For instance, our finding that those with more interaction with the forest reported more feelings of anger and frustration than those with less interaction with forest ecosystems suggests that such exposure might cultivate emotional attachment to those ecosystems, which can even be evoked through symbolic representations of them—in this case, through cinematic art. The idea that art can evoke and affect humans' emotional and spiritual connection to the natural world is discussed in a number of forums (e.g., Taylor 1993; Kellert 2005), and r our findings reinforce that possibility. Similarly, our finding that the film seemed to evoke in respondents of Native Hawaiian heritage greater feelings of pride than in those of white European heritage suggests that even simplified and archetypal artistic portrayals of indigenous societies may be ν appreciated by native peoples (as discussed in Appleford 1995).

Our qualitative findings suggest that the majority of respondents in our sample derived powerful messages from Avatar. With respect to many of the messages, ethnic background did not appear to dictate respondents' interpretation of the film, but for some of the messages, respondents of different ethnicities seemed to relate to the film differently. Specifically, our qualitative data suggest that people of varying backgrounds retained pro-environment messages from the film, including of the importance of humans connecting to the land, and readily identified the connection between Hawaii's history and Avatar's plotline. The data also suggest that respondents of Native Hawaiian background more frequently identified and related to messages regarding animism and the need to respect culture than did white respondents. However, the use of questions on the survey precludes the use of statistical analyses to explore relationships between messages and demographic data, including ethnicity, education, and age.

Overall, the messages that respondents garnered represented contemporary issues, including the nature of cultural and spiritual connections to land, post-colonial political power relations, subjugation and displacement related to natural resource extraction and use, and questions of property and domain. These issues are relevant not only to Hawaii's history but also in Hawai'i today. As many respondents indicated, the film is not likely to create a tidal wave of change; however, the depth and diversity of responses suggest that the film may help increase awareness of and dialogue about important environmental, cultural, and natural-resource issues in ways that are relevant to residents of Hawai'i and many other areas of the world.

Using Avatar to promote discussion allowed unconventional exploration of these issues. Our interaction with survey respondents was brief; a fictional story facilitated a depth of discussion that would have otherwise been difficult to achieve given the relatively short relationship between researchers and interlocutors. It is also worth noting that our principal? interviewer and three of the five survey administrators were white; the focus on Avatar may have increased respondents' comfort with expressing anti-colonial views, because they were superficially discussing the agreedupon antagonists in a fictional story.

The idea of investigating perceptions of the forest in Hawai'i through the lens of a recent blockbuster film may seem outlandish. Many of our respondents, however, all of whom were selected without any mention of Avatar, had strong reactions to the film. Moreover, those reactions precipitated discussion about profound spiritual, cultural, and historical concepts related to the connection between people and the land. These relationships represent a core of the human experience, but are often difficult to articulate. Using the platform of a film to explore such ideas, issues, and experiences may help provide insight when that insight is particularly important.

Notes

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- 1 Archaeologists estimate that human settlement in Hawai'i began sometime between 300 and 800 CE (Graves and Addison 1995).
- 2 Contemporary transliteration of the Hawaiian language includes two diacritical marks: a macron lengthens vowels, and an 'okina marks a glottal stop. We have included diacritical marks in Hawaiian words; however, for Hawaiian words that have been modified to fit English grammar (e.g., Hawaiian and Hawaii's), we omit diacritical marks.
- 3 See Scott (1998) for discussions of post-colonial theory.
- 4 In Hawaiian language and culture, for example, 'aumakua refers to ancestral guardian spirits, or "deified ancestors who might assume the shape of" of animals, plants, rocks, or clouds (Pukui and Elbert 1986, 32). Akua is translated as "god, goddess, spirit" (ibid., 15); however, akua can be more like a force, a formless spirit that is not necessarily supernatural (as discussed in Taylor 2010) or humanoid, but which can inhabit, embody, and be embodied by places.
- 5 The Bonferroni correction is a statistical method applied when many relationships are tested, increasing the likelihood that a given result will fall within the range of statistical significance by chance (Samuels and Witmer 2003). The Bonferroni method indicates that, for our study, the level of certainty needed to claim

- 95 per cent confidence is 0.05 (the desired p-value) divided by nine (the number of response categories tested); none of the results described below fall within this corrected confidence level. Nakagawa (2004) offers a criticism of the Bonferroni procedure.
- 6 There was no significant correlation between level of education and level of involvement with the forest (Spearman's rho: r=0.055, p=0.420.)
- 7 Some survey respondents described only one main message.

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Watching Avatar from "AvaTar Sands" Land

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As in the fictional world of Pandora, humans in Alberta function within a resource-based economic system with weighty environmental, social, and cultural consequences. Oil extraction has long been a major part of Alberta's economy. As conventional oil reserves have declined, it has become profitable to exploit alternative sources such as the bitumen-soaked sand and shale that make up the Alberta oil sands. Developing these reserves requires considerably more energy and water and produces more carbon emissions than developing conventional oil.¹ Also called "tar sands," Alberta's oil sands are promoted as third in size to the petroleum reserves of Saudi Arabia and Venezuela, and essential to North American energy security. Balanced against energy, ecosystem degradation, employment, and economic benefits are costs such as pollution and water depletion, cultural and health impacts on Aboriginal communities, and transfer of natural capital from the public to the coffers of corporations (Adkin et al. 2008; Nikiforuk 2008). Oil is Earth's parallel to Pandora's unobtanium.

Industry and the provincial and federal governments have aggressively defended the oil sands. Industry public relations campaigns have explicitly framed Alberta's identity in the context of energy production, with an extensive marketing campaign using the slogan "Alberta IS Energy." Similarly, the Alberta Enterprise Group, a collection of industry insiders, has repeatedly made the identity-constructing declaration "Energy is what