

Teaching Archaeological Ethics: Student Attitudes towards Cultural Heritage

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Abstract: As the world's cultural heritage is increasingly threatened by looting, military action, and modern development, the education of the public and, in particular, our students is critical if we are to work towards preserving that heritage. Most college students have not seriously considered the ethical issues related to cultural heritage in general, and more specifically the potential effects of private versus public ownership of cultural objects. We present here an analysis of two years of survey data on student attitudes towards cultural heritage from DePauw University. Results show that our students' background and experiences affect their attitudes about ethical issues related to cultural heritage and that they have underlying principles that inform their values about these issues. We also argue that understanding the perceptions of our students is necessary for the effective teaching of ethical issues in archaeology and that incorporating discussion of ethics into the classroom can help students to think critically about archeological ethics issues.

Introduction

There is no question that cultural heritage around the globe faces increasing threats from looting because of the art market, military activity, intentional destruction, and indifference. Archaeologists, museum professionals, and those involved with cultural resource management, whether through private or public funding, have been active for some time in attempting to curtail those threats. Since the 1990s there has been a spate of publications that address general ethical issues related to cultural heritage (e.g., Scarre & Scarre 2006; Vitelli 1996; Vitelli & Colwell-Chanthaphonh 2006; Zimmerman et al. 2003). There are also more specific investigations that address the problems of nationalism and armed conflict (e.g., Meskell 1998; Kohl et al. 2007), the art market and museums (e.g., Messenger 1999; Brodie 2006; Robson 2006; Rhodes 2007; Cuno 2008), and restitution of cultural property (e.g., Greenfield 1989 [1st edition] and 2007 [3rd edition]; Hitchens 1997; Fine-Dare 2002; Merryman 2006). Several blogs continuously post information on and analysis of current happenings related to looting, the art market, and cultural policy around the globe (see for example, “Looting Matters” [Gill 2010] and “Illicit Cultural Property” [Fincham 2010]). Many of these resources are written for the non-expert as well as the professional and they have been instrumental in raising public awareness about the threats to cultural heritage around the globe as well as the complexity of ethical issues in preserving and protecting that cultural heritage.

Armed with such resources as well as their academic training and research experience, academic archaeologists have a responsibility to teach the general public and, in particular, our students about the ethics of cultural heritage. Indeed, most university students are genuinely excited by archaeology, but few of them have been exposed to it as an academic discipline. Their knowledge of archaeology, and by extension cultural

heritage in general, comes from the media (for example, Indiana Jones, Laura Croft, The History Channel, see Holtorf 2007), and perhaps a visit to an art or anthropology museum. In North America, some students may have had the opportunity to visit an archaeological site, but this may not happen before they enter college. Whether they realize it or not, students enter courses that deal with cultural heritage with opinions and misconceptions formed by their own, often limited and potentially biased, experience. Even students who have encountered archaeological or cultural materials in a museum or a university course have rarely considered the ethical issues involved with the collection, study, preservation, and presentation of those materials.

While it may be possible to ask students to set their opinions and experience aside, it is important for us as educators to know what we are up against. The popular media can have a powerful influence over our students. This is certainly the case with pseudoarchaeology. K. L. Feder has collected more than twenty years of data on student opinions about pseudoscientific claims regarding the human past (Feder 2006). While Feder's data indicate that the majority of our students do not, in fact, believe that the pyramids were built by ancient astronauts or that Atlantis exists, they have likely heard these theories and it would be irresponsible of us not to address this fact. Feder concludes that "In the market place of ideas, there is clearly a demand for information about the human past. If archaeologists do not supply that demand, others will – and do (95)."

The same could be argued regarding cultural heritage. If we are to be not only effective in raising awareness of ethical issues in archaeology but also successful in guiding our students towards reaching reasonable assessments and opinions on those

issues, we must better understand the opinions our students have already formed and bring with them into the classroom.

Courses on archaeological ethics (or courses in which ethics comprises part of the curriculum) are becoming more common at both the undergraduate and graduate level. There are a number of excellent resources available for teaching archaeological ethics. These include *Archaeological Ethics* (2nd edition) edited by K. Vitelli and C. Colwell-Chanthaphonh (2006), a collection of essays originally published elsewhere, organized thematically and reprinted with discussion questions; *Ethical Issues in Archaeology*, edited by L. Zimmerman, K. Vitelli, and J. Hollowell-Zimmer (2003), a collection of essays on a wide range of ethical issues in archaeology that were specifically written to serve as a textbook on archaeological ethics; and *The Ethics of Archaeology: Philosophical Perspectives on Archaeological Practice*, edited by C. Scarre and G. Scarre (2006), a collection of essays that specifically addresses the philosophical underpinnings of a variety of issues in archaeology. Understanding our students' underlying attitudes regarding cultural heritage will allow us to make the best use of these texts and other resources.

Instructors teaching courses in archeological ethics can learn from colleagues in other academic disciplines, such as psychology and physics, who also have to deal with attitudes and misconceptions students bring with them to the classroom. Specifically, psychology instructors have studied the types of misinformation students bring to introductory courses over a number of decades (for examples, see McKeachie 1960; Miller et al. 1996; Taylor & Kowalski 2004; Vaughn, 1997) and have found that targeting

these misconceptions and engaging them in refutational exchanges using appropriate texts and classroom discussions leads to a more scientific understanding of psychology (Kowalski & Taylor 2009). Thus, archeology instructors need to start by understanding what beliefs students bring with them into the classroom so that they can develop effective approaches to the discussion of the related complex ethical issues. The current study was designed to begin gathering such data.

The DePauw University Survey of Student Attitudes towards Cultural Heritage

In 2006, one of us, Rebecca Schindler, received an internal grant from DePauw University to develop course materials on archaeological ethics. She proposed to create new course materials (including a series of case-studies specific to Mediterranean Archaeology) for CLST 161: Introduction to Mediterranean Archaeology, and to develop a new upper-level seminar course on the ethics of cultural heritage. Schindler had been teaching ethics in CLST 161 since 2001 using selections from Vitelli's *Archaeological Ethics* (1995, 1st edition) as the primary text. While this served to introduce students to the wide range of ethical issues that arise in the practice and study of archaeology, among the students there appeared to be little common ground on which to develop a critical discussion of ethical issues, and conversations often boiled down to what appeared to be personal opinions based on the students' often limited personal experience. Indeed, in the first edition of *Archaeological Ethics*, there is no discussion of moral philosophy as a background for the ethical issues introduced in the volume, and Vitelli comments that archaeologists do not need to be trained in moral philosophy to teach archaeological

ethics because we have experience with the issues (1996: 21). Scarre and Scarre, responding to Vitelli's comment, note in their introduction that, "it would be naïve to think that experience, taken raw, can provide all the moral answers" (2006: 2). In the second edition of *Archaeological Ethics*, Vitelli and Colwell-Chanthaphonh include an introduction to moral reasoning (2006: 2-4). However, this small debate points to a significant question for those of us who want to teach archaeological ethics: what can we expect from our students given that many of them will enter our classrooms with limited experience in either archaeology or philosophy? We believe this is particularly problematic in the United States where students can take electives outside of their major area of study. Thus, we wanted to know whether there was any common ground on which to base a discussion of ethical issues in archaeology as well as understanding better the preconceived ideas and values students possess when they enter courses dealing with archaeological ethics.

In 2007, we developed a survey instrument to assess student attitudes towards cultural heritage. The goal of the survey was to determine what experience students bring with them to the classroom and how that experience might inform their understanding of complex ethical issues related to cultural heritage. We administered the survey early in the fall semester to first-year students and seniors with the aim of conducting the survey for four consecutive years. We now have results from 2007 and 2008, and here we present the analyses based on those two years of data.

The survey begins with standard demographic questions: age, gender, year in school (first year or senior), major and minor fields of study, political beliefs (using a rating scale of 1, liberal to 5, conservative), and socio-economic status (also using a

rating scale of 1, lower class to 5, upper class). We also asked students whether they had visited an art museum with an ancient art or ethnographic collection, whether they had ever been to an archaeological site, whether they had been to a living history museum (e.g., Colonial Williamsburg), and whether they had taken an art history or archaeology class (see Table 1). These questions are important since we are interested in determining whether direct experience with places that provide information on cultural heritage has any effect on students' abilities to make moral judgments about related issues.

The survey then presented the students with statements about cultural heritage in random order, hereafter referred to as content questions (Q1-12), and asked them to rate their agreement using a standard Likert scale (1, strongly disagree; 2, disagree; 3, don't know; 4, agree; 5, strongly agree). We designed the twelve content questions (see Table 2) to touch on a range of issues related to cultural heritage: What are the rights and responsibilities of nation states/cultural groups versus the rights and responsibilities of individuals? What are the rights and responsibilities of archaeologists? What role should cultural institutions (i.e., museums) play in the protection of cultural heritage? And most importantly, who owns cultural heritage? Indeed, the question of ownership, or at the least stewardship, of cultural heritage is explicit or implicit in every one of the content questions. This focus was chosen because there is currently heated debate between archeologists and others interested in antiquities (such as private owners, museums, different cultures and countries, etc) over who owns, or controls, objects of cultural significance (see, for example, Messenger 1999; Carman 2005; Fitz Gibbon 2005; Robson et al 2006; Rhodes 2007; and Cuno 2008). Therefore, the survey asked students about ownership of cultural heritage in general (i.e., question nine asks whether cultural

artifacts could be considered commodities), as well as more specific questions (Q4, 5, and 11) about potential categories of owners, such as humanity (i.e., world heritage), nations, cultural groups, museums, and individuals, and their obligations to protect cultural heritage.

Another focus within the survey is the complex ethical issue of the value of scientific research versus the rights of cultural groups. For example, question seven asks whether archaeologists should be allowed to conduct scientific research on human remains, while question eleven asks whether the living descendants of cultural groups should have the right to prevent archaeologists from studying the remains of their ancestors. These questions get at the heart of the dispute over The Native American Graves Protection and Repatriation Act (NAGPRA). It is not likely that many of our students are aware of this legislation or of the controversy surrounding it (see, for example, Fine-Dare 2002 and Lackey 2006), but if we are to teach this material effectively it is important to know what opinions they may hold.

Results and Discussion

The survey was administered in the fall semesters of 2007 and 2008 using Zoomerang. All first-year students and seniors were emailed and invited to participate in the survey. To encourage participation, those who completed the survey were entered in a drawing to win one of eight gift certificates for \$25 to Amazon.com. For the two years combined, we received 429 responses (188 freshman [16 per cent of the incoming classes] and 241 seniors [25 per cent of all students eligible for graduation in 2007 and 2008]; 285 women and 143 men). In this sample, more students rate their political

beliefs as liberal than conservative, and most students consider themselves to be middle class.

Ninety per cent of the respondents had visited an art museum and 64 per cent had been to a living history museum, but only 30 per cent had been to an archaeological site or taken an art history or archaeology class. It is important to note that, as we might expect, seniors were more likely to have engaged in all of these activities (see Table 1).

Summary of All Student Responses to Content Questions

As can be seen in Table 2, students in this sample generally agreed with the following statements: that nation states in an armed conflict have a moral obligation to protect artifacts (Q1), individual nations have the right to claim ownership of the cultural heritage within their borders (Q2), the mission of museums should be to acquire art that represents the cultural heritage of the world (Q4), professional archaeologists have an obligation to educate the public about cultural heritage (Q5), and archaeologists should be allowed to conduct studies on human remains (Q7). All five of these content questions address non-individual rights and responsibilities and, in fact, get at the issues of preservation of and access to cultural heritage. When it comes to the issue of modern development versus the preservation of cultural heritage (Q10), students were slightly less certain about which they valued more. On questions addressing the control of cultural heritage (Q3 and 11), they agreed by a slight margin that both archaeologists and descendent communities have rights and responsibilities. But, on questions of outright ownership they were neutral concerning the rights of individuals and all humanity (Q6 and 12) – what might be considered the two extremes of the ownership spectrum.

However, they disagreed with the statement that cultural artifacts are commodities (Q9); an interesting result given that cultural artifacts may be found for sale in art and antiquities galleries, at major auction houses, and even on eBay. They also disagreed with the statement that individuals have the right to excavate artifacts in their own country (Q8).

Correlations for Content Questions with Political Belief and with Socio-Economic Status

We looked at how the responses to the content questions correlated with the demographic data that we collected. Student ratings for socio-economic status did not correlate significantly with any of the ratings for the content questions (see Table 3). However, there were significant correlations between ratings on political belief and seven of the content questions (see Table 4). Specifically, students who rated themselves as more liberal were more likely to agree that nation states in an armed conflict have a moral obligation to protect cultural artifacts (Q1), that professional archaeologists have an obligation to educate the public about cultural heritage (Q5) and they should be allowed to conduct scientific studies on human remains (Q7), that the preservation of archaeological sites is more important than modern development (Q9), and that living descendants should have the right to prevent scientists from excavating and studying remains (Q11). Conversely, students who rated themselves as more politically conservative were more likely to agree with the two statements that individual nations have the right to claim ownership of the cultural heritage within their borders (Q2) and that cultural artifacts are a commodity (Q9). This is interesting given that from the perspective of many archaeologists, these two statements would seem mutually exclusive.

A possible explanation for this relationship could be that these students believe that if some entity owns something, then the right to dispose of it in some way, such as selling it, is implied; however, the data we collected does not provide clear evidence for this hypothesis.

Comparison of Responses to Content Questions using Demographic Variables

We compared students on all twelve content questions using the five demographic variables, including whether they were first year students or seniors, whether they had visited an art museum with an ancient art or ethnographic collections, whether they had toured an archaeological site, whether they had ever been to a living history museum (e.g. Williamsburg, VA) or whether they had ever taken an art history or archaeology class. All statistical analyses for the comparison of the means of these groups were performed using One-way ANOVAS with the standard p-value for significance of .05 (see Tables 5 through 9).

Not surprisingly, these data indicate that for certain issues experience, either academic or through exposure to sites and museums, makes a difference. For example, on the question of the responsibility of archaeologists to educate the public (Q5), seniors as well as students who had some first-hand experience with art, museums, and archaeology were more likely to agree. This suggests that those students appreciate the value of what they learned from visiting sites and museums. Similarly, seniors and those who had visited an archaeological site or a living history museums were more likely to agree that nation states have an obligation to protect cultural monuments and artifacts during times of war (Q1).

On the question of the right of archaeologists to conduct scientific research on past populations (Q7), students were more likely to agree if they had been to an archaeological site or a living history museum. Finally, students who had visited an art museum disagreed more strongly with the statement that cultural artifacts are a commodity, which can be bought and sold, and whose value should be determined by the market (Q9).

Principal Components Analysis for Content Questions

Since we have twelve content questions that were designed to tap specific underlying constructs, we used factor analysis to reduce the data to a set of factors and to compare the resulting factors with our initial constructs. Thus, student responses to the content questions were subjected to principle components analysis and a varimax rotation was used to determine the factor structure. The resulting five factor solution considering all question loadings $> .29$ resulted in a meaningful structure that confirmed our constructs and accounted for 58.55 per cent of the variance in the responses (see Table 10).

Factor 1 consisted of four items that accounted for 18.53 per cent of the variance. Three questions load positively on this factor: questions six and nine address the ownership of cultural heritage, and question eight addresses the rights of individuals to excavate artifacts within their own country. On the other hand, question one, which relates to the obligations of nation states during an armed conflict, loads negatively on the factor. Philosophically, legal and ethical disputes over cultural heritage often boil down to the rights of individuals – either to dig up artifacts and/or to possess artifacts – versus

the rights and obligations of nation states or cultural groups (Young 2006). Thus, this factor is best labeled as “Individual Rights” in relation to cultural artifacts.

Factor 2 consisted of four items and accounted for 11.79 per cent of the variance. The four questions all loaded positively on this factor and relate to the protection, preservation, and/or control of knowledge about cultural heritage. Question one, on the obligations of nation states during an armed conflict, appears here as well as on Factor 1. Question five relates to the responsibilities of professional archaeologists to educate the public, while question eleven relates to the rights of living descendents of cultural groups. Question ten specifically asks whether the preservation of cultural heritage is more important than modern development. One of the ethical dilemmas currently faced regarding cultural heritage is not simply ownership rights, but the question of stewardship: who should be responsible for protecting, preserving, and making cultural heritage available to the public? Although, three of the questions that loaded on this factor refer to different potential stewards of cultural information (nation states, archaeologists, cultural groups), they all address the issue of “Protection/Preservation of Cultural Artifacts”.

Factor 3 consisted of four items and accounted for 10.75 per cent of the variance. Two of the questions that loaded on this factor deal with the responsibilities of professional archaeologists. Question three asks whether professional archaeologists should have the right to decide what happens to cultural artifacts and question five asks whether archaeologists have a responsibility to educate the public. Questions four, which asks about the role of museums in relation to cultural heritage, and twelve, which asks whether all cultural heritage should be viewed as belonging to all humans, address more

generally the issue of who has rights and obligations towards cultural heritage. As with Factor 2 (Protection/Preservation of Cultural Heritage), Factor 3 moves beyond the question of ownership to that of who has stewardship responsibilities. We consider this to fall under the construct of “Professional Responsibility” because the stewards in these questions are individuals, groups, or governments with an inherent connection to the cultural heritage in question.

Factor 4 consisted of three items and accounted for 8.79 per cent of the variance. The three questions loading on this factor all relate to the rights of individuals and groups to have access to artifacts for study. Two questions load positively on this factor: question twelve asks whether all cultural heritage should be considered world heritage and therefore belong to all humans, and question seven asks whether archaeologists should have the right to conduct research on human remains. At the heart of both of these questions is public access to artifacts for study and education. On the other hand, question eleven, which asks whether living descendants of past populations have the right to prevent archaeologists from studying the remains of their ancestors, loads negatively on this factor. Thus, this factor is best described as the right of “Public Access” to artifacts for research and education purposes and it not only relates to disputed legislation such as NAGPRA, but more fundamentally to debates over the repatriation of artifacts in general and of what to do with unprovenanced artifacts.

Factor 5 consisted of three items and accounted for 8.69 per cent of the variance. For this factor, individual rights of access to cultural heritage (Q8 and 12) load negatively while the rights of nation states (Q2) loads positively. Therefore, this factor relates to the

fundamental issue in archaeological ethics of the “Right of Governments” to determine what happens to cultural heritage within their own borders.

Conclusions

Not surprisingly, on the key issues of ownership/stewardship and the rights of researchers versus the rights of individuals and groups, the survey results indicate that our students’ values are complex. On the question of ownership a simple reading of the means (Table 2) indicates that our students favor the rights and obligations of nations over those of individuals, groups, and even all humanity. Indeed, students were essentially neutral on question six (the rights of individuals to own cultural artifacts) and question twelve (cultural artifacts belong to all humanity). When the data are correlated with political beliefs, a more nuanced picture emerges. Students who rate themselves as more liberal agree that nations have obligations to protect cultural heritage, while students who rate themselves as more conservative are more likely to agree that cultural artifacts are a commodity and that nations have the right to claim ownership of cultural heritage within their borders.

In contrast on the question of the rights and responsibilities of researchers versus those of descendent communities, it appears that the students have not encountered or do not yet understand the ethical complexity of this relationship. While archaeologists are likely to see the right of cultural groups to prevent scholars from conducting research (Q11) as contradictory to the rights of researchers (Q7), our students generally agreed with both statements. Moreover, both of these statements correlate positively for students who consider themselves more liberal.

It should be noted that DePauw University is a small liberal arts college (ca. 2300 students) in west-central Indiana. Although we have a relatively diverse student body – racially, ethnically, and socio-economically – our institution does attract a certain type of student. It would be interesting and important to know if the results we obtained from the survey at DePauw would be similar at a different type of school (a large public university, for example, or even a university in another country). This would be especially interesting in relation to the factor structure of the data since it clearly shows that for this sample of students archeological ethical issues related to the individual (Individual Rights, Protection of Artifacts, and Professional Responsibility) account for more variability in the responses than those related to groups of people (Public Access to Artifacts and Rights of Governments). This seems reasonable given the emphasis in the United States on individual freedom, but it also points to the possibility that the results for factor structures from other cultures that are more group oriented may not show the same structure.

The results of the DePauw University survey demonstrate that students are not blank slates in terms of their attitudes towards cultural heritage. Experience and background do matter. Students who had had more classes in art and archaeology, who had visited an museum, or an archaeological sites more strongly favored the preservation of cultural heritage and were more strongly opposed to the commodification of cultural heritage. Teaching archaeological ethics demands that we allow for open and honest debate in our classrooms. We cannot presume that our students will have the critical background to assess the complexity of most ethical dilemmas. Nor should we expect them to automatically accept our own reasoning based on our professional experience as

research scholars and teachers. We should, however, know and respect the values that they bring with them to the debate, even if the students themselves do not realize explicitly what those values are. As part of our effort to build common ground for debate in archeological ethics courses, we should help our students understand what they value when it comes to issues of cultural heritage and when their values may be in conflict with someone else's.

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Tables

Table 1: Percentages of Seniors and Freshmen with Yes Responses to Demographic Questions		
Question	Freshmen	Seniors
Have you ever visited an art museum with an ancient art or ethnographic collection?	85.1	94.6
Have you ever toured an archaeological site?	19.1	37.8
Have you ever been to a living history museum (e.g. Williamsburg, VA)?	54.3	71.0
Have you ever taken an art history or archaeology class?	14.4	41.9

Table 2: Means and Standard Deviations for Content Questions		
Question	Mean	SD
1. Nation states (on either side of an armed conflict) have a moral obligation to protect cultural monuments and artifacts during times of war	4.08	.87
2. Individual nations have the right to claim ownership of the cultural heritage within their borders	3.54	1.07
3. Archaeologists or other trained scholars should be responsible for deciding what happens to cultural artifacts	3.20	1.04
4. The mission of major museums around the world should be to acquire a collection of art that represents the cultural heritage of the world	3.69	1.07
5. Professional archaeologists have an obligation to education the public about cultural heritage	3.83	.98
6. Individuals should have the right to own cultural artifacts that they find interesting and/or aesthetically pleasing	3.01	1.12
7. Archaeologists should be allowed to conduct scientific studies on human remains in order to learn about populations of the past	4.09	.93
8. Anyone should be allowed to dig up archaeological artifacts in their own country	2.32	1.15
9. Cultural artifacts are a commodity, which can be bought and sold, and whose value should be determined by the market	2.11	1.08
10. The preservation of archaeological sites and the objects found within them is more important than modern development	3.26	1.10
11. Communities considered to be living descendents of past populations should have the right to prevent scientists from excavating and studying the remains of their ancestors	3.35	1.07
12. All cultural artifacts are part of our world heritage and therefore belong to all humans.	3.05	1.13

Question	r	p value
1. Nation states (on either side of an armed conflict) have a moral obligation to protect cultural monuments and artifacts during times of war	-.005	.91
2. Individual nations have the right to claim ownership of the cultural heritage within their borders	.008	.86
3. Archaeologists or other trained scholars should be responsible for deciding what happens to cultural artifacts	.05	.28
4. The mission of major museums around the world should be to acquire a collection of art that represents the cultural heritage of the world	-.06	.18
5. Professional archaeologists have an obligation to education the public about cultural heritage	.06	.20
6. Individuals should have the right to own cultural artifacts that they find interesting and/or aesthetically pleasing	.004	.94
7. Archaeologists should be allowed to conduct scientific studies on human remains in order to learn about populations of the past	.04	.40
8. Anyone should be allowed to dig up archaeological artifacts in their own country	-.02	.69
9. Cultural artifacts are a commodity, which can be bought and sold, and whose value should be determined by the market	.02	.73
10. The preservation of archaeological sites and the objects found within them is more important than modern development	-.05	.31
11. Communities considered to be living descendents of past populations should have the right to prevent scientists from excavating and studying the remains of their ancestors	-.07	.13
12. All cultural artifacts are part of our world heritage and therefore belong to all humans.	-.09	.07

Table 4: Correlations between Content Questions and Political Beliefs		
Question	r	p-value
1. Nation states (on either side of an armed conflict) have a moral obligation to protect cultural monuments and artifacts during times of war	-.14*	.005
2. Individual nations have the right to claim ownership of the cultural heritage within their borders	.10*	.04
3. Archaeologists or other trained scholars should be responsible for deciding what happens to cultural artifacts	-.003	.95
4. The mission of major museums around the world should be to acquire a collection of art that represents the cultural heritage of the world	.05	.33
5. Professional archaeologists have an obligation to education the public about cultural heritage	-.11*	.021
6. Individuals should have the right to own cultural artifacts that they find interesting and/or aesthetically pleasing	.025	.60
7. Archaeologists should be allowed to conduct scientific studies on human remains in order to learn about populations of the past	-.13*	.007
8. Anyone should be allowed to dig up archaeological artifacts in their own country	-.004	.94
9. Cultural artifacts are a commodity, which can be bought and sold, and whose value should be determined by the market	.13*	.006
10. The preservation of archaeological sites and the objects found within them is more important than modern development	-.14*	.003
11. Communities considered to be living descendents of past populations should have the right to prevent scientists from excavating and studying the remains of their ancestors	-.10*	.03
12. All cultural artifacts are part of our world heritage and therefore belong to all humans.	-.09	.06

*indicates significant correlations $p < .05$

Table 5: ANOVA Results and Means for Comparisons between First Year Students and Seniors for Content Questions				
Questions (Abbreviated)	Means		ANOVA Results	
	Freshmen	Seniors	F	p-value
1. Nation states have moral obligation to protect artifacts during war	3.95	4.18	7.24*	.007
2. Nations can claim ownership of cultural heritage	3.49	3.57	.56	.45
3. Archaeologists should decide what happens to artifacts	3.11	3.27	2.61	.11
4. Mission of museums should be to acquire collection of artifacts	3.79	3.62	2.87	.09
5. Professional archaeologists have obligation to educate public	3.63	3.99	14.53*	>.001
6. Individuals should have the right to own artifacts	2.99	3.02	.11	.75
7. Archaeologists should be allowed to study artifacts	4.05	4.12	.57	.45
8. Anyone can dig up artifacts in their country	2.42	2.24	2.51	.11
9. Cultural artifacts are a commodity	2.19	2.04	2.04	.15
10. Preservation of sites is more important than development	3.17	3.33	2.28	.13
11. Living descendents have rights over remains of ancestors	3.31	3.39	.48	.49
12. Cultural artifacts belong to all humans	3.09	3.03	.27	.61

* indicates a significant F value ($p < .05$) for Tables 5 through 8

Table 6: ANOVA Results and Means for Comparisons between Students who have or have not Visited an Art Museum for Content Questions				
Questions (Abbreviated)	Means		ANOVA Results	
	Visited	Not Visited	F	p-value
1. Nation states have moral obligation to protect artifacts during war	4.10	3.88	2.42	.12
2. Nations can claim ownership of cultural heritage	3.54	3.49	.10	.75
3. Archaeologists should decide what happens to artifacts	3.19	3.29	.37	.54
4. Mission of museums should be to acquire collection of artifacts	3.69	3.78	.25	.62
5. Professional archaeologists have obligation to educate public	3.88	3.33	12.24*	.001
6. Individuals should have the right to own artifacts	2.98	3.27	2.43	.12
7. Archaeologists should be allowed to study artifacts	4.11	3.88	2.28	.13
8. Anyone can dig up artifacts in their country	2.31	2.41	.31	.58
9. Cultural artifacts are a commodity	2.06	2.51	6.43*	.01
10. Preservation of sites is more important than development	3.27	3.17	.30	.58
11. Living descendents have rights over remains of ancestors	3.38	3.10	2.62	.11
12. Cultural artifacts belong to all humans	3.05	3.07	.01	.91

Table 7: ANOVA Results and Means for Comparisons between Students who have or have not Visited an Archeological Site for Content Questions				
Questions (Abbreviated)	Means		ANOVA Results	
	Visited	Not Visited	F	p-value
1. Nation states have moral obligation to protect artifacts during war	4.25	4.01	6.52*	.01
2. Nations can claim ownership of cultural heritage	3.47	3.57	.72	.40
3. Archaeologists should decide what happens to artifacts	3.22	3.19	.09	.76
4. Mission of museums should be to acquire collection of artifacts	3.63	3.73	.82	.38
5. Professional archaeologists have obligation to educate public	4.05	3.73	9.29*	.002
6. Individuals should have the right to own artifacts	2.92	3.04	.95	.33
7. Archaeologists should be allowed to study artifacts	4.24	4.02	5.22*	.02
8. Anyone can dig up artifacts in their country	2.24	2.36	.87	.35
9. Cultural artifacts are a commodity	1.99	2.16	2.07	.15
10. Preservation of sites is more important than development	3.36	3.21	1.73	.19
11. Living descendents have rights over remains of ancestors	3.31	3.36	.19	.66
12. Cultural artifacts belong to all humans	2.98	3.08	.69	.41

Table 8: ANOVA Results and Means for Comparisons between Students who have or have not Visited a Living History Museum for Content Questions				
Questions (Abbreviated)	Means		ANOVA Results	
	Visited	Not Visited	F	p-value
1. Nation states have moral obligation to protect artifacts during war	4.20	3.86	15.32*	<.001
2. Nations can claim ownership of cultural heritage	3.53	3.54	.005	.94
3. Archaeologists should decide what happens to artifacts	3.21	3.20	.005	.94
4. Mission of museums should be to acquire collection of artifacts	3.63	3.81	2.70	.10
5. Professional archaeologists have obligation to educate public	3.91	3.69	5.29*	.02
6. Individuals should have the right to own artifacts	2.97	3.08	.90	.34
7. Archaeologists should be allowed to study artifacts	4.19	3.93	7.89*	.005
8. Anyone can dig up artifacts in their country	2.34	2.30	.09	.76
9. Cultural artifacts are a commodity	2.04	2.21	2.59	.11
10. Preservation of sites is more important than development	3.28	3.24	.12	.73
11. Living descendents have rights over remains of ancestors	3.28	3.47	3.11	.08
12. Cultural artifacts belong to all humans	3.08	3.02	.26	.61

Table 9: ANOVA Results and Means for Comparisons between Students who have or have not taken an Art History or Archeology Class for Content Questions				
Questions (Abbreviated)	Means		ANOVA Results	
	Taken	Not Taken	F	p-value
1. Nation states have moral obligation to protect artifacts during war	4.17	4.04	2.05	.15
2. Nations can claim ownership of cultural heritage	3.49	3.56	.34	.56
3. Archaeologists should decide what happens to artifacts	3.27	3.17	.77	.38
4. Mission of museums should be to acquire collection of artifacts	3.62	3.72	.82	.37
5. Professional archaeologists have obligation to educate public	4.03	3.75	7.77*	.006
6. Individuals should have the right to own artifacts	2.97	3.03	.24	.63
7. Archaeologists should be allowed to study artifacts	4.18	4.05	1.85	.18
8. Anyone can dig up artifacts in their country	2.25	2.35	.62	.43
9. Cultural artifacts are a commodity	2.10	2.11	.01	.94
10. Preservation of sites is more important than development	3.40	3.20	2.99	.09
11. Living descendents have rights over remains of ancestors	3.32	3.37	.18	.67
12. Cultural artifacts belong to all humans	3.10	3.03	.33	.57

Table 10: Factor Loadings for the Final Five-Factor Structure					
Factors and Item Summaries	Factor Loadings				
	1	2	3	4	5
Factor 1: Individual Rights					
1. Nation states moral obligation to protect artifacts during war	-.41				
6. Individuals rights to own artifacts	.78				
8. Anyone can dig up artifacts in their country	.64				
9. Cultural artifacts are a commodity	.71				
Factor 2: Protection of Artifacts					
1. Nation states have moral obligation to protect artifacts during war		.53			
5. Professional archaeologists have obligation to educate public		.62			
10. Preservation of sites is more important than development		.70			
11. Living descendents have rights		.53			
Factor 3: Professional Responsibility					
3. Archaeologists decide what happens to artifacts			.69		
4. Mission of museums to acquire collection of artifacts			.82		
5. Professional archaeologists have obligation to educate public			.29		
12. Cultural artifacts belong to all humans			.29		
Factor 4: Public Access to Artifacts					
7. Archaeologists should be allowed to study artifacts				.77	
11. Living descendants have rights				-.53	
12. Cultural artifacts belong to all humans				.48	
Factor 5: Rights of Governments					
2. Nations can claim ownership of cultural heritage					.87

8. Anyone can dig up artifacts in their country					-.30
12. Cultural artifacts belong to all humans					-.31

Author biographies

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