



The Applied Anthropologist

ISSN 0882-4894

VOLUME 37 NUMBER 2 2017

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The Applied Anthropologist publishes peer-reviewed articles, commentaries, brief communications, field reports, and book reviews on a wide range of topics. The journal's focus is on cultural change and adaptation in the modern world. It explores how humans approach, analyze, and develop solutions to cultural, ecological, economic, and technological problems. The journal is supported and underwritten by the High Plains Society for Applied Anthropology. Guidelines for authors, electronic access to back issues, and further information about the society is available on the website at www.HPSfAA.org.

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No. 2
2017

POINT-TO-POINT THE VALUE OF HAITI PETER W. VAN ARSDALE

KittyKat is the nickname of a lively 18-year-old Haitian man. He lives in the town of Gressier with an extended family headed by his uncle. He makes ends meet by fixing things, arranging things, improving things. KittyKat speaks three languages, and greets everyone – friends and strangers alike – with a hearty “bonjour.” He’s the kind of person you’d want to know.

In late January, 2018, a team of Colorado Rotarians (of which I was one) and colleagues arrived in Gressier to assist with the Respire School. We came at the invitation of folks living there. Over 500 students, from pre-kindergarten through 9th grade, attend. Some are *restaveks*, indentured to Haitian families. Among many tasks, we taught classes, fixed furniture, planted trees, painted buildings, assessed the water and sanitation system, and provided medical supplies. Teaching topics as diverse as origami, orienteering, and zumba, we met lively students and adults eager to learn. Hiking up Bellevue Mountain to the school each day, we scrambled up a rocky road. We asked the Haitians we passed how they were. Each responded with an energetic “trés bien.” They’re the kind of people you’d want to know.

One evening we met with fellow Rotarians, Haitian business and community leaders who are members of the Leogane Rotary Club. The town of Leogane sits squarely at the epicenter of the 2010 earthquake. Though partially demolished, the town has rebounded; some sectors are even thriving. We danced to lively Caribbean tunes played by a string band. We shared a tasty meal. We toasted our colleagues and they toasted us. That evening, among us, we raised enough money to fund two school scholarships for impoverished children. One Leogane Rotarian said: “These kids will be the innovators of Haiti’s future!”

These Rotarians are the kind of people you’d want to know.

A man named Abelard and I had several long conversations. He speaks eloquently. He works two jobs, about 14 hours a day. He pulled out his cell phone to proudly show me photos of his wife and three children. “I work hard for them,” he said. We discussed the challenges of Haitian corruption, broken infrastructure, tangled bureaucracy, and inadequate educational systems. In many ways the country is dysfunctional. We also discussed the exuberance of Haitian life and cultural traditions, and the resilience of people who’ve been down but not out. Abelard speaks four languages, one of which is Spanish. When I wished him farewell, I said: “Hasta la vista, Baby.” He roared with laughter. He’s the kind of person you’d want to know.

Also eloquent is the current Haitian ambassador to the United States, Paul Altidor. After extraordinarily demeaning remarks about Haiti by President Trump on January 11th, 2018, the ambassador was invited to share his opinions on the PBS Newshour the next day. While condemning what allegedly had been said, he took the high road. He noted Haiti’s long history of involvement with the United States, the fact that the two countries have lived successfully side-by-side, the fact that Haitian soldiers have fought alongside American soldiers. Over 300,000 people died as a result of the 2010 earthquake, yet he stressed how the nation had pulled through. Stereotypes need to be dispelled, and he invited Trump to meet with Haitians in places like Miami, to learn more.

The value of Haiti is in its people. Paul Altidor is the kind of person President Trump should get to know. He’s the kind of person applied anthropologists often have the privilege of getting to know.

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HIGH PLAINS SOCIETY FOR APPLIED ANTHROPOLOGY: 2018
STATE OF THE ORGANIZATION

DAVID PIACENTI

State of the Organization

For nearly forty years the High Plains Society for Applied Anthropology has taken up the struggles of various vulnerable communities. Hand in hand, we have assisted communities who are attempting to assert their human rights, maintain their dignity, protect their rights to exist and their sovereignty, and create positive social change. With varying results this has been our mission—our struggle—our passion.

We have taken this passion from the 19th century to the 21st century. Alongside other anthropological organizations, we have taken up the good fight. If you are new to the High Plains Society for Applied Anthropology, or are unfamiliar with our membership's acts of service, I would like to highlight a few projects that our members are involved in. These projects are some of the finest in the business and represent just a taste of what we can do when a community of practitioners has broken down the compartments of fragmented *gesellschaft* to create an authentic *gemeinschaft*. Member-driven projects consist of work with the Ute Mountain Ute, education of students from seasonal farmworker backgrounds, Dominican deportees and call back centers, the Ch'orti' language project in Guatemala, emotional work with motherless daughters, visual documentary of street artists in Los Angeles, Italian-Mexican immigrant communities in Puebla, Mexico, political conflict and human rights in South Sudan, the anthropology of health and healing, the emotional damage of military service, social action and art in La Alma neighborhood, and the rights of adolescents who are confronted with a police presence in their schools. This is only a sample of what the High Plains membership does daily to improve our world and to struggle for the rights, recognition, and equal status of all human beings.

Current Challenges

Anthropologists have always faced challenges. Dwindling or precarious financial support, competition over grant funding, program elimination, the chasm between applied and theoretical anthropology, and political challenges to the integrity of our discipline are perennial realities. Today is no exception, and is quite possibly the most hostile milieu any of us has experienced in quite a while. Although science has yet to be the panacea it promised, the current presidential administration has recklessly constructed a normative context of skepticism, dismissiveness, and cynicism that threatens all facets of science—literally denouncing the integrity of the scientific method. We have fallen through the thin ice of cynicism as an ideology. Because of this dangerous political context, our applied work is more important than ever before. In turn, organizations such as High Plains are more important than ever

before. We cannot allow ourselves to become isolated, alienated, jaded, discouraged, and self-defeating. Now is the time to maintain and bolster our ranks, to expand our community, and to prepare the younger generations of anthropologists for the battles of the future.

I am confident that High Plains will stand strong and weather the storm. Our successes are many, as we continue to create new alliances with local communities, organizations, universities and practitioners of a wide variety of backgrounds. If we cannot run, we will walk. If we cannot walk, we will crawl. And if we cannot crawl, we will carry each other to the finish line. We shall overcome. Not because science is the only answer, but because our hearts and our minds are in the right place.

Recent Changes

Like any healthy organization, High Plains has seen some needed changes in the last year. Because of Wells Fargo's support of the development of the Keystone XL pipeline dangerously close to the Standing Rock Reservation, and because of the environmental threat the pipeline creates in general, we decided to divest and place our funds in more ethically-principled financial houses. We are now banking with Elevations Credit Union.

We have also had some personnel changes via elections as well as part of the natural course of term limits. Our past President Dr. Kathleen Van Vlack has moved to New York but has taken the reins of our journal, *The Applied Anthropologist*, as Editor-in-Chief, in addition to her duties as Chair of Membership. Dr. Daniel Hopkins has been serving as Chair of Elections and Saniego Sanchez has taken on the very arduous role of Treasurer. Our last presidential election resulted in Josef Garrett, fresh off a Master's degree from UCLA, winning. Joe is now serving as President-elect until the spring 2019 annual conference, where he will be knighted as our new leader.

High Plains' peer-reviewed journal *The Applied Anthropologist*, now enjoying over thirty year of publication, is re-vamping its formatting in order to stay current with standards and practices in the industry. Although a print-copy journal since its inception, *The Applied Anthropologist* converted to an online-only format several years ago. This is in-step with other leading industry journals, which are seeking to make the publication process more efficient and affordable, broaden information availability by creating a more democratic approach to sharing our knowledge, and minimizing our environmental impact of, and, dependency on natural resources. We hope you appreciate this paradigmatic shift.

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Coming Soon

There are many exciting developments at High Plains and it is my honor to preview some of our growth initiatives. Prior to our Spring Conference, I will be attending the International Organization for Social Science and Behavioral Research (IOSSBR) Conference in New Orleans, Louisiana. As president and diplomat, I will be attending informal meetings with the President of IOSSBR, Dr. Randall Valentine, where we will be discussing strategies for developing High Plains. I am confident this sequestering of minds will yield many constructive ideas that will be soon realized as High Plains plots a course forward. This year's Spring Conference's theme focuses on dislocation of communities, dispossession of resources, exile, recognition and status. We are very pleased to be hosted by the Four Winds American Indian Council, and are excited at the prospect of developing this new relationship. Other future collaborations consist of piggy-backing on the Society for Anthropology in Community College's (SACC) National Conference, which will be in Denver in 2019. We have been in active talks with SACC and will be co-sponsoring the conference, giving each organization an opportunity to make connections and expand influence. Lastly, we are also in talks with the Texas Applied Anthropology Summit organization and are looking for ways to collaborate or possibly integrate our respective conferences in coming years. Exciting developments indeed!

Let Us Move Forward

In spite of our current challenges I believe that High Plains will continue to thrive and do good things for and in collaboration with the peoples of the world. The people I've been honored to meet in this organization are not only colleagues, but cherished friends and family who have filled my life with joyous memories.

Thank you for sharing the ride. I love you all.

I am confident that we will continue to support and produce high quality practitioners, develop meaningful projects, publish cutting edge anthropology articles, and advance our art and craft by connecting with other anthropologists, non-profit organizations and communities. In closing, I call on our members to seek out opportunities to mentor the younger generations. Teach them what you know, tell your stories, make them laugh, provide your wisdom, show your humility and your humanity. Prepare them for a life-changing future, and a future that includes a love for applied anthropology.

Thanks and Acknowledgements

I would like to express thanks to Dr. Kathleen Van Vlack for suggesting I write this piece, and to Dr. Howard Stein for graciously agreeing to read a preliminary draft and provide feedback and advice.



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REMEMBERING MARGARET MEAD FOR THE 21ST CENTURY

EDITH W. KING

Remembering Margaret Mead for the 21st Century

Today Planet Earth is experiencing one of its most trying eras. Extremism and fanatic actions like the current vehicular terrorism, are witnessed in major cities of the affluent nations. Across the globe there is a rise of populism and nationalism, as widely differing groups of ethnic, racial, religious and linguistic heritage are demanding recognition. Human-created destruction and environmental devastation are experienced worldwide. To add to this turmoil a new threat is lurking of nuclear war and a worldwide nuclear holocaust. In troubled times applied anthropologists may turn to the wisdom and practical advice from social scientists of the recent past. One of these, a familiar public figure of the 1970s and 1980s, is the often-quoted anthropologist, Margaret Mead.

Margaret Mead was among the most memorable and outstanding of cultural anthropologists of the 20th century. She is still recognized by people who might not be able to name even one other major figure in the social sciences of the 20th century. She was born in 1901, just at the turn of the 20th century, and died in 1978 at age 77. Margaret Mead challenged the accepted theories and pronouncements about adolescence in developed countries. She advocated empowering women and strove for women's rights early in the 20th century. Furthermore, Mead was a creative theorist advancing a theory of the cultural evolution of societies.



Margaret Mead

That we are more aware of our own culture through the study of other cultures is an idiom found throughout Margaret Mead's books. One of her most famous works is the research on adolescent girls in Samoa during the 1920s at the inception of her career in anthropology. In her autobiography, *Black-berry Winter*, she wrote:

When I sailed for Samoa, I realized only very vaguely what a commitment to field work and writing about field work meant. My decision to become an anthropologist was based in part on my belief that a scientist, even one who had no great and special gift, such as a great artist must have, could make a useful contribution to knowledge. Even in remote parts of the world ways of life about which nothing was known were vanishing before the onslaught of modern civilization. The work of recording these unknown ways of life had to be done now—NOW—or they would be lost forever. (Mead, 1972, p. 137)

Mead was just twenty-three years old when she set out for Samoa and her first attempt at studying another culture. In the initial weeks, she worked hard to become conversant with the language. On one of the Samoan islands, T'au, she was provided a home with an American medical officer, within the environs of a village and in easy reach of her subjects. For the rest of that year on the small Samoan island, Mead moved and lived among the people and observed the life of adolescent girls.

From Samoa, she returned to the United States to take up the post of assistant curator that had been offered her at the American Museum of Natural History. It was here that she wrote the report that later was published as her first book, *Coming of Age in Samoa*. No other anthropologist had written such a book before about a seemingly exotic culture; it read like a novel, not like a scientific tome. Moreover, until Mead went to Samoa and wrote about young girls, focusing on their lives, their thoughts, their habits, and their folkways, children and women had largely been ignored by anthropologists. Although she chose never to study Samoan culture again, the themes of this study—the rearing of children, the shaping of personality, and the role of women in society—came to be the themes that inspired Mead's studies for the rest of her career.

Coming of Age in Samoa was a tradition-breaker. It appeared in 1928 and quickly became a bestseller inside and

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outside of anthropology. The book thrust Mead into prominence in the United States at a time when people were already caught up in a growing revolt against Victorian attitudes about child rearing and sexuality. What was particularly astonishing, however, for readers of the time, was the revelation that adolescence is not a fixed pattern. The young women and young men of Samoa did not, Mead observed, experience adolescence as we do. Rather than thinking of adolescence as a purely biological determined aspect of the maturation process, social scientists were becoming aware that it was more complex. Adolescence was a matter of cultural as well as biological aging.



An Early Advocate for the Women's Movement

During the 1930s and into the beginning of the 1940s, before the outbreak of World War II, Mead continued her studies of childhood and child rearing in other exotic and "primitive" cultures of the Pacific—the Manus of New Guinea and the Balinese. She now had partners—Leo Fortune, her second husband, with whom she studied the Manus, and later Gregory Bateson, her third and last husband, who made trips with her to Bali and back to New Guinea. In working with the Manus people, she chose to study the mental processes of children and pioneered the use of psychological tests to examine the thinking of her subjects. This is detailed in the book *Growing Up in New Guinea*. Margaret Mead's fame grew in the United States following World War II. One of her most important and most strongly felt causes was the Women's Movement. She was recorded as remarking that "I've never been an imitation man. I've done things in my work only a woman can do. I've studied and observed children in areas where no man would be tolerated" (quoted in Cassidy, 1982, p. 14). Only a few years before her death, she wrote:

Today, the discussions that bring women together from every level of technical development all over the world reveal what women—and the world—have lost. Increasingly centralized, industrialized planning and production steadily reduce women to choosing be-

tween the role of housekeeper with mild supplementary activities—in the performance of which she is unprotected and ill paid in the marketplace—or that of educated but subordinate and unmarried competitor in all the other spheres of life. (Mead, 1975, p. 130)

She then went on to question a social order that no longer meets the newly aroused hopes of the people who live within it. Mead believed that the voices of women were combining with voices all over the world against a worldwide system of political and economic exploitation of the land, the sea, and the air, and the endangered populations that depend upon them. Mead saw a new strength in women's empowerment. She asserted that when women speak and exert their influence and power not only women gain, but society gains too. In 1975, she wrote:

Where once half of the best minds were consumed in the performance of small domestic tasks, society can now draw on them. Where women's experiences—inevitably different from men's because women all had mothers with whom they could identify—have been fenced off from contributing to the high-level planning of the world, they can now be used in the attack on such problems as chaotic abuse of food, resources, human settlement and the total environment. When women are once more able to participate in decisions and are free to be persons as well as parents, they should be able to contribute basic understandings that are presently lacking in the world. These basic new understandings include the fact that food is meant to be used to feed human beings, not to serve as a weapon or commodity; that towns were meant for generations to live in together, not only as barracks or bedrooms; that education can be used to make life meaningful; that we do live in a world community that is here but is unrecognized, in all its interdependence and need for shared responsibility. (Mead, 1975, p. 131)

Exemplifying her proselytizing for women's places and positions in world affairs, Margaret Mead served on many civic boards and influential state, national and international committees during her lifetime. Furthermore, she was elected president of the American Anthropological Association, the Society for Applied Anthropology, as well as the prestigious American Association for the Advancement of Science. Among her awards was a gold medal from the Society of Women Geographers and the Kalinga Prize for the Popularization of Science by UNESCO for interpreting science to the public. Her views and opinions appeared in newspapers and magazines, such as *Time*, *Life* and *Newsweek*, for several decades during the mid-20th century.



Time Magazine once named her the “Mother of the Year;” and the United States Post Office placed her picture on a stamp in 1998 (see p. 10, herein).

Margaret Mead wrote extensively about the attributes and peculiarities of those she labeled “Americans.” Writing during the 1930s and 1940s, she contended that because people were upwardly mobile, often changing geographic and socioeconomic situations (in contrast to older, more settled, and more rigidly class-structured societies), they have a longing and need to find specific roots. Therefore, she contended, citizens of the U.S. attach much more importance to their “home towns” than do citizens of other nations. Mead described how one American will meet another traveling abroad, and as soon as they establish that they both grew up in the same town, they become close friends for the remainder of the journey. She noted that this may possibly explain the penchant for joining clubs, groups, and associations, so that membership in an organization somehow fills a gap in one’s life. For Mead, these were national character traits of being extremely independent and extroverted, while masking an inner longing for deep roots and a defined family lineage. In addition, she deemed that many Americans are overly success-oriented. This can be demonstrated by the urgency some parents feel to have their children do better in their careers than they themselves have done, both financially and socially.

Margaret Mead and the Continuity of Cultures

The strongest legacy of Margaret Mead as an outstanding social analyst and critic, however, is to be found in her contributions to the development of a global culture and a world view of humanity. In her 1970 publication *Culture and Commitment: A Study of the Generation Gap*, she wrote:

We have the means of reaching all of earth’s diverse peoples and we have the concepts that make it possible for us to understand them, and they now share in a world-wide, technologically propagated culture, within which they are able to listen as well as to talk to us.

(Mead, 1970, p. xvi)

Mead pointed out that in the technology of the mid-20th century there was available to us for the first time on the “spaceship Earth,” examples of the ways people have lived at every period over the last fifty thousand years. With eloquent style she pointed out that a New Guinea native looks at a pile of yams and pronounces them “a lot” because he cannot count them, while teams at Cape Kennedy calculate the precise second when an Apollo mission must change its course if it is to orbit around the moon (Mead, 1970).

Beginning with the book *Continuities in Cultural Evolution* and culminating in a series of lectures for the American Museum

of Natural History (published in the volume titled *Culture and Commitment*), Mead set forth her theory about cultural learning and the evolution of human culture on the planet. She stated that it was her goal to explore and compare existing cultures with differing levels of technological development, all existing in the present time but exhibiting essential differences and discontinuities. Mead differentiated them as historic, contemporary, or future oriented. She emphasized that in the presentation of this paradigm of cultural development or continuities, she would deal with cultures that had been observed and documented. Mead then set out to describe three major types of cultures. She labeled them as follows:

1. Post-figurative cultures, or cultures living with the past
2. Co-figurative cultures, or cultures living with the present
3. Pre-figurative cultures, or cultures living with the future

She noted, we have before us examples of people who represent successive phases in the history of humankind from hunting and gathering societies to the present. Our contemporary technologies give us the means to study and record the actions of these people for later analysis. We can even put a camera in their hands to record and help us see what we, because of our upbringing, cannot ascertain or know to record and document. After a millennium of post-figurative and then co-figurative cultures, Mead asserted, we have arrived at a new pre-figurative stage in the evolution of human cultures.

Taking up the “co-figurative” culture, Mead characterized it as one in which the prevailing model for members of the society is the actions of their contemporaries. Why should a society change from a past orientation to living in a present type of culture? Explaining the change, Mead said that there is a break in the post-figurative system. Such a break may come about in many ways. She listed the following possibilities:

...through a catastrophe in which a total population, but particularly the old who were essential to leadership, is decimated;

...as the result of the development of new forms of technology in which the old are not expert;

...following migration to a new land where the elders are, and always will be, regarded as immigrants and strangers;

...in the aftermath of a conquest in which subject populations are required to learn the language and the ways of the conqueror;

...due to a religious conversion, when adult converts try to bring up children to embody new ideals they themselves never experienced as children and adolescents;



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...as a purposeful step in a revolution that establishes itself through the introduction of new and different life styles for the young. (Mead, 1970, p. 33)

The forces that contributed to the change from post-figuration to co-figuration were set in motion by modernization and the aggressive colonization of developed nations of the world during the close of the 19th and into the early-20th century. Searching for material resources, for their ever-expanding production of goods and later services, the industrialized, technologized nations of the world—Britain, France, Germany, and the United States—expanded around the globe, annexing, subjugating, and controlling the natural and human resources of other countries and groups of people.

As Mead pointed out, the situation in which moving into the present culture occurs is one in which the experience of the younger generation is radically different from that of their parents, grandparents, and other older members of their immediate community. Furthermore, she stressed, the transition to a new way of life in which new skills and modes of behavior must be acquired appears to be much easier when there are not grandparents present who remember the past, shape the experience of the growing child, and reinforce all the unspoken values of the old culture. Mead reiterated that the past once represented by living people becomes shadowy and easier to abandon—and to falsify, in retrospect.

The anthropologist writes:

Suddenly, because all the peoples of the world are part of one electronically based, intercommunicating network, young people everywhere share a kind of experience that none of the elders ever have had or will have. Conversely, the older generation will never see repeated in the lives of young people their own unprecedented experience of sequentially emerging change. This break between generations is wholly new; it is planetary and universal. Today's children have grown up in a world their elders never knew, but few adults knew that this would be so. (Mead, 1970, p. 64)

Mead said that this was the third stage of her theory of cultural continuities—the future culture was a totally new conception of living, in which adults learn from their children. Because change has occurred so rapidly within one person's lifetime, the older generations can no longer teach the young. Specifically, this pointed to the entrance of all humanity into the nuclear era. In the past, no matter how terrible the war, humankind did survive, but today a nuclear conflagration likely would mean there will be no survivors, no humanity. However, Mead contended, we continue to think that a war fought with more lethal weapons would just be a worse war. We still do not grasp the implications of scientific weapons of extinction. She emphasized that in having moved into a present for which none

of us is prepared by our understanding of the past, our expectations about the future are clouded. We have left behind our familiar worlds to live in a new age under conditions that are different from any we have ever known, but our thinking still binds us to the past.

With the unbridled optimism that characterized Margaret Mead all her life, she challenged the younger generation to lash out against the controls to which they are subjected. She told the young that they have never known a time when war did not threaten the annihilation of humankind. They should realize there is continuing pollution of the air, the water, and the sod. Soon it will be impossible to feed an indefinitely expanding world population. We must find a feasible and humane means of population control. In short, the young must now insist on some form of world order or our planet is doomed. Mead summed up her theory of cultural continuities as follows:

For I believe we are on the verge of developing a new kind of culture..... I call this new style, *pre-figurative*, because in this new culture it will be the child—and not the parent and grandparent—that represents what is to come. Instead of the erect, white-haired elder who, in post-figurative cultures, stood for the past and the future in all their grandeur and continuity, the unborn child, already conceived but still in the womb, must become the symbol of what life will be like. (Mead, 1970, p. 88)

In his thorough biography of Margaret Mead, Robert Cassidy concludes with the observation that her most important contribution as a social thinker of the 20th century was her ability to assimilate and apply information from a wide range of fields. She then processed the facts, created a whole new viewpoint, and communicated her findings in plain English to the American public (Cassidy, 1982). And she will always be remembered for her optimism. Her colleagues, friends, and family are quick to respond at the mention of her name. They would say that Margaret Mead believed human beings can rid the world of hunger, spread the benefits of technology to developing nations, and achieve world peace. She stands as a social thinker, a prophetess, and America's unforgettable anthropological grandmother.

Mead is an example of the applied social thinker *par excellence*. She revealed the power of social science concepts and their relevance to the personal lives of the public. Recognizing a little-known contribution by Margaret Mead, Harry Wolcott, the late anthropologist and educator, noted that Mead defined and described a unique example of "anthropological sampling." This is the category of sampling in research that builds the case on only one or a few known examples. Wolcott describes this type of "anthropological sampling" quoting from A. L. Kroeber's 1953 volume:

Anthropological sampling ... is simply a different kind of sampling, in which the validity of the sample de-



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pendes not so much upon the number of cases as upon the proper specification of the informant in terms of a number of variables...Within this very extensive degree of specification, each informant is studied as a perfect example, an organic representation of the complete cultural experience. (Margaret Mead, 1953: 654-655 in Wolcott, 2010, p.34)

Furthermore, Wolcott explains that this kind of sampling allowed anthropologists to depict a society when only a few survivors of a possibly dying or vanished culture remained (p.34).

Margaret Mead for the 21st Century

The purpose of this article is to provide selected coverage and renewed attention to Margaret Mead's contributions to anthropology and the social sciences in the 20th century. Now I am suggesting just a few of the challenges facing our nation in the 21st century that Mead might advocate. Fondly known as America's "anthropological grandmother" because of her emphasis on the family in international contexts, Margaret Mead recognized that a new global culture would present new challenges. This now includes the world wide web, the wide spread use of technology, and post-modern "cultural artifacts" such as cell phones and the laptop or tablet personal computers that Mead never dealt with during her time. In this digital age the possession of a cell phone can be crucial when unforeseen disasters or acts of terrorism strike.

Another pressing concern in American society Mead might explore is that of the "Dreamers", young people brought illegally to the U.S. as children. There are as many as 690,000 undocumented youth with their legal status in question as of Fall, 2017 (*Wall Street Journal*, November 9, 2017). The plight of the "Dreamers" is a contemporary dilemma that would quickly capture Mead's attention because of her research into child rearing and socialization in various cultures including America's social order. Her voice would join others seeking to resolve these unjust conditions (King, 2013).

Mead, as a cultural anthropologist, was deeply concerned with rectifying the injustices and follies of the human scene. Her philosophy stressed that we had a moral duty to recognize when there was much human suffering and act to rectify the situation. Today in the 21st century, Margaret Mead would surely reinforce Peter Van Arsdale's emphasis on one's moral duty to prevent hatred and genocide, to fight extremism and promote the wellbeing of humanity. In his latest book, *Global Human Rights* (Waveland Press, 2017), Van Arsdale asserts that moral actions are our obligation. "When our skills are sufficient, ...when we are confronted with assisting those under duress whose rights have been abused, we must act. We have an obligation" (p.95).

Indeed, these words are echoes of Margaret Mead's legacy in the 21st century; a legacy for the perpetual sanctity of human life.



References for the Writings of Margaret Mead

Margaret Mead's writings are wide ranging and extensive. Some of her best-known works are:

And Keep Your Powder Dry: An Anthropologist Looks at America (New York: Morrow, 1942).

Balinese Character: A Photographic Analysis (with Gregory Bateson) (New York: New York Academy of Sciences, 1942).

Blackberry Winter: My Earlier Years (New York: Morrow, 1972).

Childhood in Contemporary Cultures (Editor, with Martha Wolfenstein) (Chicago: University of Chicago Press, 1955).

Coming of Age in Samoa: A Psychological Study of Primitive Youth for Western Civilization (New York: Morrow, 1928).

Continuities in Cultural Evolution. (New York: Transaction Publishers, 1999 [orig. 1964]).

Cooperation and Competition Among Primitive People (Editor) (New York: McGraw-Hill, 1937).

Cultural Patterns and Technical Change: A Manual Prepared by the World Federation for Mental Health (Editor) (Paris: UNESCO, 1953).

Culture and Commitment: A Study of the Generation Gap (Garden City, NY: Natural History Press/Doubleday, 1970).

Growing Up in New Guinea: A Comparative Study of Primitive Education (New York: Morrow, 1930).

Male and Female: A Study of Sexes in a Changing World (New York: Morrow, 1949).



"Needed: Full Partnership for Women," *Saturday Review*, June 14, 1975, p. 130-131.

New Lives for Old: Cultural Transformation—Manus, 1928-1953 (New York: Morrow, 1956).

The School in American Culture (Cambridge, Massachusetts: Harvard University Press, 1951).

Sex and Temperament in Three Primitive Societies (New York: Morrow, 1937).

Soviet Attitudes Toward Authority (New York: McGraw-Hill, 1954).

Four Families (film for the National Film Board of Canada, Margaret Mead, producer) (New York: McGraw-Hill, distributor, 1959).

References for this article

All photos from the Public Domain

Cassidy, Robert. (1982) *Margaret Mead: A Voice for the Century*. New York: Universe Books.

Freeman, Derek. (1999) *The Fateful Hoaxing of Margaret Mead: A Historical Analysis of Her Samoan Research*. Boulder, Colorado: Westview Press.

Freeman, Derek. (1983) *Margaret Mead and Samoa: The Making and Unmaking of an Anthropological Myth*. Cambridge, Massachusetts, Harvard University Press.

King, Edith. (2013) "The Dilemma of Undocumented Youth in the United States" *The Applied Anthropologist*, Vol.33, No.12 pp.36-39.

King, Edith W. (2014) *Social Thought On Education*. Amazon: Kindle.

Orans, Martin. (1996) *Not Even Wrong: Margaret Mead, Derek Freeman and the Samoans*. Novato, California: Chandler and Sharp Publishers.

Van Arsdale, Peter W. (2017) *Global Human Rights: People, Processes, and Principles*. Long Grove, Illinois: Waveland Press.

Wall Street Journal. (2017) "Dreamers Aren't Targets, Nielsen Says" Nov. 9, 2017.

Wolcott, Harry R. (2010) *Ethnography Lessons: A Primer*. Walnut Creek, California: Left Coast Press.



The Applied Anthropologist

Vol. 37
No. 2
2017

BEYOND 'WHAT EVERYBODY KNOWS': DOING APPLIED ANTHROPOLOGY BY TURNING UP THE VOLUME!

GORDON BRONITSKY

Introduction

First, let me introduce myself. By way of background, I'm an anthropologist by training (PhD University of Arizona 1977). For the last 23 years, I have been founder/president of Bronitsky and Associates dba IndigeNOW!, our non-profit production arm. IndigeNOW's mission is simple – to work with Indigenous artisans and performers to promote their incredible contributions to our world. We have been creating unique cultural experiences for over 30 years – from intimate artisan gatherings to multi-day festivals with international participation.

You name it, we've probably done it, from the deserts of New Mexico to the steppes of Mongolia. We have long-standing relationships with leading contemporary Indigenous chefs, performing artists (Navajo hip-hop anyone?) and Indigenous organizations around the world. We've also created and presented cultural marketing training programs around the globe for Indigenous artists with the support of numerous governments and NGOs. For example, I served as initiator and Executive Producer of ORIGINS: First Nations Festival™ which brought Indigenous theatre companies and performers from the United States, Canada, Australia and New Zealand to theatres and venues in London. I regularly conduct arts and cultural marketing workshops in other countries, such as China and Russia, working with the U.S. State Department and countries' cultural groups and embassies. For instance, I led a delegation of Navajo leaders for an Indigenous summit in Siberia, conducted an International Cultural Marketing Workshop in Zimbabwe, spoke about international cultural marketing in Siberia, and produced a Navajo/Yakuts cultural summit in Yakutsk, Russia.

I produced IndigenAHORA! September 23, 2017—an international Indigenous hip hop concert with N8V ACE, a Navajo hip hop artist from Albuquerque, and Luanko, a Mapuche Indian hip hop artist from Chile. And next year, we are producing IndigeNOW!, an international Indigenous culinary festival that will showcase Indigenous chefs and Indigenous food producers from around the world.

I've worked on every continent except Antarctica.

Over the years, I've described my business as one in which Native people and performers choose the message, whether that message is a traditional Navajo music and dance group, an Aboriginal Australian theater company or a Navajo fashion designer—and I've worked with all three. My job has never been to tinker with the message, adding an eagle feather here and an eagle feather there. My job has always been to CRANK UP THE VOLUME.

What Have I Learned In Order to Succeed?

Cultural sensitivity and advocacy are absolutely central to my work. As an example, I toured the Chinle Valley Singers to a festival in the Philippines. The organizers asked the singers to bless the festival. They talked among themselves and came to me. They would agree to perform a blessing but it would have to be on their terms—no photography, no recording, no applause. I had to know this was a sufficiently important issue that I took it to the festival organizers and fought for it – and won. Blessing accomplished.

Personal sensitivity is important too. Whenever the Chinle Valley Singers tour to a country with beaches, they ask to visit the beach to perform a ceremony. I always make it happen – but I don't ask what it is, and I don't participate—it's a private and personal religious ceremony. In one country, our driver took us to the beach. The singers began their ceremony, and the driver began to walk over to the group. I told him that this was the time for us to take a stroll elsewhere along the beach, and off we went.

Knowledge of what Indigenous performers actually do is important – not just what "everybody knows" they do. Equally important is a commitment to fighting for Indigenous performers to be heard, to educating venues and audiences about the depth and diversity of indigenous performance.

Several years ago, I received an email from an organization in Israel, proudly announcing that a Native performer would appear at its upcoming event. I did a little web research and found out the performer is actually not Native. I shared this with the organizers, only to be informed that this performer was "more oriented to Native spirituality" than many Native performers, and they weren't going to be "restricted by genetics." We had a lengthy discussion by email; at the end, I suggested to them that it would be something like asking Jews for Jesus to explain Judaism. And there it ended.

More recently I had a long and heated discussion with Eastern European scholars at a state-sponsored Folk Center. The topic—authenticity and Indigenous performing arts. They maintained the importance of scholars determining authenticity; I countered that all too often, "authenticity" means non-Indigenous scholars judging Indigenous performers and performance. I emphasized that this is not my role—Navajo hip hop, Navajo jazz, Navajo heavy metal, for instance (and I've worked with all three) ARE Navajo music. On the other hand, during a tour of the Chinle Valley Singers to China, they performed at a university and we met with students who were studying traditional Indigenous, non-Han dances and how to

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perform them. As it turned out, all of them were Han Chinese; none were non-Han. And when I asked them why they had chosen this field of study, they all replied that they hoped to start or join dance groups and earn money through touring. It's a complicated situation!

Advocacy – working hard, fighting hard to get indigenous messages heard by as many people as possible, on their terms, in the best environments possible, to get past the trap of what “everybody knows” – that is the heart of what I do.

Cultural sensitivity is key to success in this business. American Indians and other Indigenous peoples have had countless experiences with non-Indigenous authors, writers, and performers speaking on their behalf. Those days are gone – if indeed they ever existed. Since the beginning of my work, I have reiterated that I am not indigenous, don't pretend to be, and don't play one on TV. This means that in my work, Indigenous artists and performers choose the message, whether this message has been a traditional Navajo music and dance group, a Navajo fashion designer, or an Aboriginal Australian playwright (and I've worked with all three). I make it clear that my job is not to tinker with the message, adding a feather here and there. My job is and has always been to turn up the volume!

But how to get these voices heard? I've been called a producer. I've been called an impresario. Both terms really mean “find the money.” Creating and succeeding at this business has meant that I have had to learn many new skills and to develop a new worldview, and none of this was taught in graduate school. When I began my career, I would receive letters from European venues, stating they would be “honored” to have American Indians participate in their festival. A few follow-up queries, and I learned quickly that “honored” is another way of saying they didn't have the funds. I realized that if I wanted the artists I worked with to tour, if I wanted the events I designed to happen, I had to figure out where to get funding. Over the years, the Kellogg Foundation, UNESCO and numerous US and foreign embassies and consulates (among others) have helped fund my work.

It has meant creating a draft letter of invitation for one of the groups that venues can use to contact the United States embassy in that country for possible assistance with international travel costs. It has meant figuring out what funders want. In discussions with potential venues, especially potential host resorts and hotels, I seldom discuss the beauty and power of Indigenous performance. Instead, I focus on “heads in beds”—the fact that this festival will draw an international audience to their facility and can brand the facility as a unique destination.

Of course, I've had failures, and some have been spectacular. When I was just starting out, I encountered a Native American fluteplayer—he was also starting out but he was a very good performer and I thought he had considerable potential. He was a little nervous about going overseas, but I got him an engagement at an American embassy in Europe—a very nice fee plus, of course, meals, lodging and all travel, a performance at the embassy, and meetings with music promoters in the country. He remained nervous, I continued to push for him to go—

and three weeks before his departure, I got a voice mail that the opportunity wasn't professional enough for him and to quit bothering him. He didn't go, and the US embassy in that country hated me for years. But it helps to develop a sense of humor about these things. The next year, this same performer called me and said he had reconsidered and would be interested in working with me again. I told him that he had stiffed me. His reply remains engraved in my memory—“I only stiffed you once!” Needless to say, I didn't work with him again—and I learned the hard way that if someone is hesitant, just drop the project.

Why Do I Do the Work I Do? How Do I Do It?

I start with a fundamental fact based on 23 years of work. Indigenous artists and performers are almost always marginalized—there is one and only one Indigenous artist or performer at an event or festival, especially in the performing arts, especially for contemporary performers.

This marginalization often traps performers, audiences and venues into the limitations of what “everybody knows” Indigenous people do, rather than opening all of us up to the power and diversity of what Indigenous people actually do. For instance, American Indian music certainly includes powwow and flute music—but it also includes chamber music, hip hop and heavy metal. Yes, some American Indian music is spiritual—but it is also loud, angry, funny, and much more. Ironically, much of what “everybody knows” has its origin in the traveling shows of the 19th century, such as Buffalo Bill Cody's traveling Wild West Show that stereotyped Native Americans and was instrumental in shaping American perceptions of Native Americans.

As a result, non-Indigenous peoples have had very limited opportunities to experience authentic Indigenous contemporary performances:

1. Public and scholarly audiences interested in experiencing, exploring and comparing contemporary Indigenous performance have been restricted by funding and geography
2. Indigenous performance has all too often been limited to comparatively small and local audiences
3. Misinformation about Indigenous peoples has often prevailed in the majority culture in many lands, due to distortions of commercial media, isolation of Indigenous communities, stereotypes, and the inability of urban residents to access Indigenous communities.

But where can audiences and booking agents and venues go to listen to this music, see the range of Indigenous performance, hear Indigenous comedy? In conversation with American Indian artists and performers, I often say that if I asked them where I could hear the best powwow music, or see the best arts and crafts, they could easily name ten places off the top of their heads. But if I was to ask where I could hear the best Indigenous hip hop, see the best Indigenous theater, enjoy the best Indigenous fashion, the answer is often just a shake of the head—who knows?



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However, it's not because the Indigenous fashion, hip hop and theater isn't there. It's because there is no place to experience international Indigenous performances on a regular basis. Yes, several countries now have festivals and events which regularly showcase the best in their countries—shoutouts to The Dreaming in Australia, Manito Ahbee, Planet IndigenUS and Imagine + Native in Canada and Pasifika in New Zealand. These are all English-speaking countries and they have led the way. But what about Indigenous performance and performers from Siberia? or Mexico? or Peru?

Where Am I Going?

Based on our experience since 1994, we think the problem in creating markets for contemporary Indigenous performance has not been a lack of talent or an absence of passion about performance. The key problems, in our opinion, have often been the following:

1. lack of regular, annual international venues to which audiences, venues, booking agents, reporters and writers can return again and again to experience new works, new creators, new performers, and see the growth of the performing community over time
2. poor production values (sound, light, etc) due to the poverty of many Indigenous communities
3. poor promotion, sometimes due to rural isolation, poverty or other factors
4. the absence in some countries of national Indigenous performance associations which would create an economy of scale to overcome the problems listed above due to economic marginalization.

As a result, I have decided that my goal will be to create a range of annual Indigenous performing arts festivals—Latin American Indigenous hip hop, Arctic peoples, and more—that will:

1. be partnered, from the beginning, with an Indigenous organization or community;
2. showcase the best Indigenous performing artists;
3. train Indigenous young people how to run the festival and, eventually, take it over;
4. introduce Indigenous performing artists to the business of performance—what is an agent? what is a contract?etc,—since many people come from isolated rural and urban communities where this information is difficult if not impossible to find;
5. eventually, serve as a performing arts showcase as well, by introducing the best Indigenous performers to venues and booking agents from around the world.

Such festivals will:

1. provide opportunities for participants to further develop their performance skills and insight, and achieve professionalism;

2. improve the quality of Indigenous performing arts;
3. educate national and international publics to the diversity and excellence of contemporary Indigenous performance;
4. enable audiences to learn from Indigenous performers, musicians, choreographers, playwrights, authors, actors, directors, designers, writers and others—on their own terms and in their own voices;
5. bring Indigenous performing artists, writers, directors, etc, together so that they can learn from each other and overcome some of the isolation in which many of these artists work;
6. create educational opportunities for Indigenous and non-Indigenous students.

It won't be easy – it may not even be possible – but it's where I'm going.

I have had to begin at the beginning, listening and learning from community members to go beyond what "everybody knows" Indigenous performance is. How do I go about this? Whenever I come to an Indigenous community, I make it a point to do two things.

First, I ask the Indigenous people I meet "Is there someone in your community who did something that made you say, "Wow, that's great!" I follow this up by emphasizing that I haven't said "traditional" or "contemporary," "visual" or "performance." What I want is "Wow." Indigenous people have grown accustomed to outsiders coming into their communities in response to perceived problems in the community – land loss, disease, substance abuse, spousal abuse, and more. These are obviously important questions but my experience and expertise are in a very different domain. I want to know what they consider the best they have, who they regard as outstanding performers and artists, without regard to the common anthropological emphasis on tradition (an approach I've sometimes referred to as "Keep 'em pure, keep 'em poor").

Second, I have learned how to say "Why not?" in the local language. This is a wonderfully open-ended question, which brings my passion and humor into play, while showing that I care about the community in my own way (and lets me speak with my hands). They know and I know that I'm an outsider but an outsider with a strong interest in the best they have and the experience and skills to work with them to get their voices and messages "out there." Community members know their community and its performers better than I ever will, and I know international cultural marketing. It can be an ideal partnership of equals.

This isn't rocket science. Cultural awareness and sensitivity are integral parts of anthropology and what anthropologists do. Anthropologists have learned to partner as equals with community members to learn about their communities. I think the time is here for anthropologists to partner with Indigenous performers to TURN UP THE VOLUME!



ENVIRONMENTAL MULTIPLICITY IN THE EXUMAS, BAHAMAS: A SOCIAL AND NATURAL RESILIENCE MODEL

RICHARD W. STOFFLE, KATHLEEN VAN VLACK,
AND NATHAN O'MEARA

ABSTRACT

This analysis is about how African ancestry people living on isolated islands and cays in the central Bahamas have learned about their environment. The case contains a clear date for the beginning of environmental learning after the collapse of slave plantations in the late 1790s. Two types of TEK (Traditional Ecological Knowledge), traditional hand fishing and ethnobotany, illustrate the complexity of in situ knowledge domains. Their TEK moves beyond the basic understanding of species to awareness of species interactions, ecosystem functions, and ways to conserve their delicate coastal environment. These aspects of their adaptation and conservation have produced a lifeway based on environmental multiplicity that reflects resilience. The implications for the continuing work of applied anthropologists in this area are clear.

KEYWORDS: Bahamas, traditional people, environmental multiplicity, learning TEK

This analysis of six African ancestry communities in the Exumas, Bahamas (Figure 1) presents the beginning of the formation of Traditional Ecological Knowledge (TEK) and an understanding of how it was used to sustain nature and community. It is argued that through environmental learning and socio-ecological adaptations, the residents created a resilient way of life. Resiliency, termed here environmental multiplicity, involves both redundancies in natural resource use strategies and in interdependent social relationships at the community level.

This research involved 572 interviews conducted with 193 people from six coastal communities. Many people were interviewed multiple times with various instruments. One research goal was understanding how potential Marine Protected Areas (MPAs) could impact local communities, and which of these impacts would best predict local responses to the MPAs. Conducted over six years, the eight field sessions permitted an iterative cycle of collecting data, analyzing findings, and returning to the field with new and revised data collection instruments.

This analysis assumes that people begin learning about nature as soon as they arrive in a place. Such knowledge is often termed *local knowledge*, and it may be useful in terms of proper environmental behavior within a generation (Olssen and Folke 2001). To move from simple observations to deeper ecological understandings of environmental relationships takes many generations. The Stoffle, Toupal, and Zedeño (2003) co-adaptation model of learning argues that within five generations people will acquire deep ecology understandings. The term traditional knowledge can be used when (1) the people know something about the ecosystem functions, (2) have developed various use strategies to both gain from and protect the ecosystem, and (3) have experienced more than a hundred

years of environmental perturbations against which to understand the resiliency of their adaptive strategies. Indigenous knowledge is a deeper level of knowledge. It is defined as non-intuitive understanding that span species and trophic levels.

When a people learn about their ecosystems and adjust their adaptive strategies to protect them from natural and social perturbations, they can be said to have developed a resilient way of life (Berkes, Colding, and Folke 2003: 13-16; Holling 1973). This analysis strengthens the resilience model by viewing natural and social adaptations as parallel developments.

Environmental multiplicity builds on the Comitas (1964) theory of occupational multiplicity as a foundation of social resilience. He documented that many Jamaicans acquire skills, invest in the local resources, and hold several jobs at one time. Even though it makes more economic sense to invest all of their work time in the highest paying job, they spread their efforts across a range of jobs because jobs come and go in the boom and bust economies of the Caribbean. Occupational multiplicity has become a robust explanation of a Caribbean economic strategy. In this essay, we combine this with socio-ecological resilience into a single environmental multiplicity model.

The Environmental and Historical Setting

The society and culture of the people of the Exumas primarily derives from plantation slavery as it was lived out on a series of small islands and cays located along the sharp edge of a deep ocean and shallow bank. Mangroves generally occur on the leeward or bank-side of cays and islands while sand beaches and a few rocky cliffs characterize the ocean side. The Exumas are a very low and flat limestone ridge with very little soil covering the islands and cays. Limestone weath-



ering creates solution holes (*banana holes*) that are used for farming when organic material is present (Sealey 1994). Little rain falls and surface water only occurs where the water lens breaks through the coral forming a spring or blue hole; thus, all agriculture is rain dependent and desert-like conditions occur on smaller cays. When cays are close to one another strong currents occur, thus forming micro-niches on the nearby land and in the sea. The ecology of the islands and cays is influenced by insular biogeography (Morrison 1997), which is easily influenced by natural and human perturbations.

The Exumas were surveyed and conditionally given to British Loyalist plantation owners following the Revolutionary War. A plat map made in 1792 documents the presence of 115 land grants (Craton and Saunders 1998). As a condition for receiving Crown Lands, the Loyalists were required to clear the land and make it into productive plantations. Failure to accomplish this within ten years would result in forfeiture of the land.

Loyalists were required to rapidly produce commercial plantations. They sold off all commercial timber and planted cash crops such as cotton on all suitable land. Tropical rains and hurricanes soon revealed the danger of opening all lands to farming. Keegan and Mitchel (1986) estimated that the topsoil of most plantations washed away within three years, exposing the hard calcariferous bedrock. The chenille bug destroyed much of the cotton grown in the Bahamas in the late 1790s (Saunders 1985). Most Exumian slave plantations quickly failed at cash cropping, but a couple continued on as salt producers. While the Loyalists left the Exumas, the African ancestry population remained (Craton and Saunders 1998).

Examples of TEK

Traditional people in the Exumas have developed complex understandings about many aspects of their island biogeography. This analysis uses grubbing and ethnobotany to illustrate how TEK has become the foundation of conservation rules which in turn are tied to social relationships that are supported by the exchange of goods and services.

Grubbing

Both Creole and African slaves could have brought knowledge of coastal mangroves and hand fishing, but the Exuma research suggests that this is not the case because most were from interior areas away from the coasts (Wilkie and Farnsworth 2005). It is argued here that because the African ancestry people arrived in the Exumas with little useful knowledge of the marine ecosystem, the cultural practice of grubbing is a specific adaptation to leeward mangroves located in relatively calm and shallow banks.

Marine learning during slavery was directly influenced by mobility and location. All plantations were near the littoral and some slaves were permitted provision gardens. Slaves could stand on the shore and watch ocean currents, learn about the movement of water in the mangroves, study fish behaviors, and observe how weather patterns such as mid-

day storms and hurricanes affect the sea.

TEK learned during this period was critical because when the plantation failed, the workers were abandoned and immediately needed a place to turn for subsistence, tools, and shelter. With a lack of game animals, few domestic animals, and only small gardens, people turned to the sea. Without boats to travel to deep waters and lacking fishing gear, they fished with their hands – a practice they call grubbing.

Grubbing only occurs in the mangroves where the sea is relatively calm and shallow. This style of fishing involves using hands to catch fish during low to medium tides. In order to grub, a person must obtain a great amount of knowledge of the littoral environment. TEK involves seven critical subjects: (1) tides - grubbing occurs between low to medium tides because then it is easy to walk to grubbing locations, (2) fish behaviors and types – especially important are life cycles, (3) weather - rapidly changing weather conditions place people at risk, (4) plants - these were used to disorient fish and to protect grubbing groups from attack, (5) predators—mangroves are a dangerous place to walk because of sharks, moray eels, and barracudas, (6) mangroves management—a system of regulations was imposed to assure that the key ecological roles were protected, and (7) social relations—normally grubbing involved groups who functioned successfully when there was a shared division of labor, clear communication, mutual commitment, and redundant skills.

Littoral TEK was the foundation of three different grubbing techniques: (1) grubbing circle, (2) hole grubbing, and (3) chemical grubbing. Each technique is adjusted to ecologically different dimensions of the mangrove and structures the social relationships of fishing.

Exposed Mangroves and the Grubbing Circle

Knowledge of the grubbing circle primarily comes from a location called Forbes Hill where it involved a large group of women, usually one from every household and sometimes her oldest child. The group would venture a mile and a half off shore to the end of a large mangrove peninsula. A deep salt-water creek had to be crossed to get to the mangrove from shore (Figure 2). One of the best grubbing areas is indeed about 1.5 miles from shore where despite being surrounded by land on three sides, it is especially vulnerable to shifts in tide and weather, as well as large predators. Other areas are directly open to the sea and shallow, thus have places where the mangrove dries out completely forming massive mud flats. Women recount sinking up to their waist in sticky mud and the more open areas rapidly fill with water leaving people exposed to sharks and barracudas.

Because of the risks and distance away from shore, the dozen or more women who circle grubbed together had very specialized roles. One woman was charged with watching the whole group. She made sure every woman returned home safely even if it meant helping her swim across the blue holes and the creek. Another woman was charged with watching the tides. The Forbes Hill mangrove system is on the leeward side





of the island, but it is still exposed to unpredictable tides. Women who did not know how to swim had to be aided across dangerous waters, and perhaps all the way home if the tide came in suddenly. One woman constantly watched for dangerous animals like sharks, barracudas, and moray eels. This woman had to be fearless because she also fended off these animals. The women interviewed recalled an incident when a moray eel swam into the group and this woman forced her hand down the moray's throat and strangled it to death, thus removing it from their grubbing circle.

The majority of the women were *fish herders*, whose role was to muddy the mangrove waters by slowly walking in a line, slightly raising a muddy cloud which caused the fish to become confused and have a difficult time breathing. The herders move the fish in an ever tightening semi-circle towards a group of *fish catchers* each of whom has on a wide flared skirt. The fish catchers tuck the hem of this skirt tightly underneath their heels. As the fish are driven blindly, they seek refuge under the skirt where they are easily caught and placed into a specially constructed woven grubbing basket with a narrow opening at the top. Children who accompany their mothers, grandmothers, and aunts often hold the baskets. They are brought into the mangroves to learn this grubbing technique, which takes years to learn due to the difficulty in mastering required skills. These women developed this unique fishing method by integrating social organization and cooperation, mangrove TEK, a wide flair skirt, and a narrow mouthed basket.

The women had the responsibility to catch fish for the whole community. When the women returned home, they gave fish to other community members who could not go out into the mangroves to grub. Fish were often exchanged for breads or vegetables. Sometimes people in the settlement would use the fish to have a large communal meal. The women of Forbes Hill depended on each other to maintain this aspect of traditional life.

Sheltered Mangroves and Hole Grubbing

The second type of grubbing is referred to as hole grubbing. Hole grubbing occurs in settlements throughout the northern and central Exumas where both men and women grub in small groups or as individuals. This is a hand fishing pattern that is well adapted to sheltered mangroves located close to the shore. In Moss Town, the mangrove has a three-hour tidal delay because it is almost totally enclosed by two seaward bluffs. Nearby in another sheltered mangrove is a distinctive ecological patch characterized by a cluster of unusually tall and dense mangrove trees growing on hard ground just below the water. The fish are plentiful in this area, according to local TEK, because the taller trees have a larger root system that provides more nutrients and shelter for several fish species.

Hole grubbing in these sheltered mangroves is focused on the use of naturally occurring and man-made holes in the mud. People dig holes in certain areas, so they can design and define their grubbing spots. The slow moving tides do not eliminate the holes, thus special patch ecology is created. The hole grubbers carefully frighten and drive fish with muddy water so they re-

treat into known holes in the mangrove. A fisher then sticks his/her hands into the hole to grab the fish. People learned that the water temperature indicates whether it is safe to reach into these holes to catch fish.

Chemical Grubbing

Chemical grubbing is an individualistic form of fishing that involves the use of two poisonous plants called dogwood (*Piscidia piscipula*) and joewood (*Jacquinia keyensis*). These plants grow in coastal lowlands, rocky slopes, and dunes throughout the Exumas. The leaves or bark are ground up, mixed with lime, and placed in a bag, which is placed in the water when needed. The mixture causes the fish to become confused, slow and disoriented (*drunk* as the people describe it) thus making them easy to grab by hand. This condition only lasts for a brief period, so quick action is required. It is also a dangerous practice because the disoriented fish quickly attract predators.

Some individuals who do not use the dogwood for fishing, often still carry a pouch of it ready to use in case of sharks or other dangerous fish. Women who scull small boats along the shore recount keeping dogwood to protect themselves from sharks. Use of a poisonous plant for fishing or protection only occurs among the adults because this knowledge is deemed too dangerous for the youth. This type of TEK is only transmitted to the younger generations when the community elders believe the young people can handle it properly.

Grubbing and Technological Change

Grubbing continued to be a primary form of subsistence fishing in the Exumas throughout the post-slavery period, but its frequency declined due to new technologies associated with boat building, fishing lines, and nets. Access to new fishing technologies allowed people to travel beyond the mangrove system into deeper waters. By expanding traditional fishing territory, Exumians broadened their marine knowledge. People with boats learned about the best distant and deep locations to fish. Fishing teams had multiple places to fish because it was never beneficial to always fish the same area. By dispersing fishing pressure and learning about new marine environments, people did not over-fish the mangroves despite increases in population and more efficient technologies.

A system of conservation ethics is imposed because mangroves are a vital part of the ecosystem. These regulations involve only taking fish from the mangroves when necessary, not fishing in the mangroves every day, and never taking juvenile fish. Rules are imposed at the family and community levels so the mangroves are protected for future generations. A man from Little Farmers Cay explained that in the mangroves, young fish grow before moving to the deeper waters and therefore people learned not to fish in the mangroves all the time. In Moss Town, local people have redundant mangrove resource use areas to prevent overexploitation. To prevent depletion of the Margaret Fish (*Haemulon album*; *Anisotremus surinamensis*), they fish in two very different mangroves—one close to the settlement and another in the leeward cays. This strategy gives the fish in





both mangroves time to replenish their populations. Redundancies are important for conservation so people have access to multiple areas with similar ecology.

Even though people have acquired new fishing technologies and use territories away from shore, knowledge of and respect for grubbing persists. People still grub occasionally, but speak of it more as a traditional way of life that can always be turned to in times of need. It is a source of pride in the resourcefulness of the ancestors and a proven way of fishing to be relied upon during difficult periods.

Ethnobotany

The people of the Exumas hold ethnobotanical knowledge that rivals the best of other indigenous groups. Currently the Exumian ethnobotany domain includes 264 species with many of these plants having multiple uses, often involving different plant parts. A question addressed here is how did Exumians come to know and rely on so many plants in such a relatively brief time. The uniqueness of Exumian flora suggests that this knowledge was learned *in situ*. Of the 264 plants used, 131 are native exclusively to the Caribbean and the southern United States, with some being endemic to the Bahamas. Taylor's (1921) early work on endemism in the Bahamas found that 22.7 % of all Bahamian endemics occur on the now submerged Great Bahama Bank. As sea levels rose, the islands of New Providence, Eleuthera, Cat, Long, Andros and the Exumas were created from the high points of this former island. The remaining 133 plant species are exotics and cultigens from tropical America and to a lesser extent from Asia, Africa, the Pacific and Europe. While some plant learning still occurs, Exumians credit the earliest generations as the ones who engaged in the greatest experimentation.

Learning Bush Medicine

The rapid raise of the plantation system directly influenced slave medicinal plant learning because the Exumian flora underwent a series of dramatic changes. Plantation owners indiscriminately cleared the majority of the Exumian terrain leaving only the littoral and presumably sparse patches of native forest. As plantations failed, slave experimentation began immediately with the few native plants left uncut at the edges of the former plantations. Former slaves could now explore the island and adjacent cays finding more plants. Several studies document similar patterns of bush medicine occurring throughout the Bahamas (Halberstein and Saunders 1978; Higgs 1974; Sawyer 1955). These studies verify that individual plant species are used in similar ways across the archipelago, suggesting TEK transfers between islands. Independent learning also occurs.

Although the medicinal properties of individual plants were learned *in situ*, bush medicine as a traditional form of healing is part of a larger cultural continuum that extends back to Africa, thus making the curative properties of bush medicine as much cultural as bio-chemical. It is noted that 85% of today's Bahamian population are direct descendents of West African people

(Eldridge 1975). Africans brought with them the epistemological principles of an established tradition of medicinal plant use. These principles guided early experimentation with the new Exumian flora; so when a new plant was being tested, it was not a careless act of trial and error. Instead sophisticated cultural indicators and established incremental testing procedures were used to prevent fatal experiments. Exumians today say that three pathways guide medicine plant learning. First, the inherent properties of plants such as the plant's smell, colors, floral characteristics, leaf arrangement and number, growth form, or habitat indicate what purposes the plant can serve. Second, to learn the medicinal properties of plants, people would also observe the effects of wild plants on animals such as cows, sheep and goats. This has led (e.g.) to people not using cotton leaf (*Calotropis procera*) internally because of its fatal effects on livestock. Third, through prayer and fasting, medicinal plants have been revealed to special individuals in the form of dreams and visions. This tradition has roots in African cultures and has been documented in other Caribbean communities (Payne-Jackson and Alleyne 2004), thus cultural cognitions underlying medicinal plant experimentation came from Africa. They were however altered and refined over generations as TEK was expanded in the Exumas.

After more than 220 years of systematic testing and experiment, Exumians utilize over 150 medicine plants safely and effectively. Exumians know the appropriate preparation, administration, and dosages needed to activate the healing properties of individual plants as well as the curative outcomes of multiple plant interactions. Bush teas can involve mixing as many as five different species. For example, a tea made from parts of five-finger (*Tabebuia bahamensis*), love vine (*Cassytha filiformis*), strong back (*Bourreria ovata*), gumelemi (*Bursera simaruba*), and three-finger (*Thouinia discolor*) is consumed by farmers for strength and vitality. Exumians know where to locate healing plants in their local environment and encourage the growth of some medicinal plants by weeding, burning, and transplanting in or near gardens.

Learning Swidden Agriculture

By emancipation in 1834, most Exumian slaves were engaged in subsistence farming, fishing, and stock raising (Saunders 1985). The slaves developed a sustainable style of swidden farming that closely matched that of the Lucayans. It is not clear how Native American cultigen seeds were reintroduced but there is almost a one-to-one match between aboriginal crops and those grown soon after slavery. The reestablishment of swidden agriculture was probably influenced by the retention of African farming knowledge. Today, local farmers have a heightened understanding of how the biotic and abiotic elements of the Exumas affect farmed plants.

Increasing Biodiversity

Traditional land management practices such as patterns of cutting, burning, intercropping, picking, and fallowing enhance





ecological sustainability. Removing excess debris, exposing the soil for planting, and killing crop-eating insect larvae, as well as burning, are perceived as the best ways to make nutrients available to crops and the wild plant species which will colonize the field once it is left fallow.

This traditional style of farming where native and cultivated plants intermingle has been shown in other systems to increase intraspecific and interspecific biodiversity by creating and leaving habitat for native plants and animals (Oldfield and Alcorn 1987; Nabhan 1989). In effect, Exumian fields are an intermediate disturbance because of their small size and limited spatial distribution. The process of field rotation and fallowing not only leaves large stands of native vegetation unharmed, but also creates opportunities for the encouragement of rare species by providing space, light, water, and nutrients on the field's margins.

Exumians note that their livelihoods depend as much on wild plant resources for nutrition, medicine, revenue, and material goods as on the crops they sow. As a result, they have developed sustainable harvesting practices that allow them to collect without adversely impacting native plant populations. For example, silver top palm (*Coccothrinax argentata*) leaves are used in a profitable cottage industry. New leaves are collected, dried, and then woven into baskets, hats, purses, fishnets, and ropes. Local people have learned to cut the new growth in precise ways so that the plant keeps growing. They caution that if the leaves were pulled, instead of cut, this would damage the growing tip of the palm causing its eventual death.

Environmental Multiplicity

Exumians developed and use today multistranded and redundant relationships with nature and neighboring people – a pattern of co-adaptation called here *environmental multiplicity*. The local settlement is at the center of these relationships and it is the primary unit of adaptation. Taken together these multiple ways of doing almost everything in life from fishing to building homes, at first blush, might appear to be senseless even uneconomic. Why should environmental knowledge be so widely shared when a few specialists could be consulted? Why are there redundancies in the system? The answer is resilience.

The ability of social and natural systems to survive must be understood in terms of what threatens to imbalance them. Until the 1950s, Exumians largely were on their own when it came to preparing for and recovering from perturbations. These adaptations are illustrated here by examples of natural and social perturbation.

Hurricanes damage buildings; erode soil; uproot large trees, and yet community members quickly respond by repairing homes and community docks. Lots of hands are needed to quickly bring buildings back to basic function, even if it is understood that more complicated repairs and replacements will eventually be in the hands of a few more experienced workers. Longer-term problems occur when storm surges cover low-lying fields killing the extant crops and making the fields salty thus unsuitable for agriculture for years. The solution is to have

fields at different elevations, so a rocky up-land field can be left fallow until a hurricane surge leaves the more fertile low-land field useless.

Off-site (“away”) labor has a range of impacts depending on how many adults have left the settlement and how long they are gone. Benefits from remittances (money sent home) are often translated into immediate improvement in homes, land, and material consumption. Differences in wealth are leveled due to obligations of mutual help and the patterns of almost every family in the settlement sending a member (usually a man) overseas for contract labor. Away labor, however, removes persons with important skills and can be a basis for eventually relocation of whole families from the settlement. Patterns of female circle grubbing in one settlement can be explained in part as an adaptation to all the husbands in each family being a way on contract labor. Return migrants often reinvigorate their natal settlements by using political savvy and more advanced education to strengthen settlement power in environmental debates.

Conclusion: Threats and Adaptations

There are many other threats, each having their own natural and social impacts. For example, natural perturbations include droughts, plant diseases, and exotic species intrusions like the fruit fly. Social perturbations include trade blockades during wars (Sheridan 1976), shifts in value of local cash crops in world markets, availability of away work, loss of de facto natural resources to outsiders, tourism, and even proposed MPAs (Stoffle and Minnis 2007).

Environmental multiplicity was traditionally apparent in the daily round of a settlement. Daily subsistence fishing is done for the settlement. A general cultural principle is that “you fish until you have something for each cooking pot in the settlement.” When a fishing team returns to the settlement, they carefully divide the fish and each fisher goes from house to house offering a portion of the catch. Each family reciprocates by offering the fisher a drink of rum. This old practice has a variety of natural and social implications. It greatly reduces the number of people who need to fish daily. People who do not fish can help community members in other ways such as to build or repair homes, maintain or open fields, or aid in the harvest. This principle assures that the amount of fish caught is carefully measured to assure subsistence thus reducing the possibility that redundant fishing teams would catch more than needed in the settlement. Because fishing teams have different preferred fishing areas, this practice disperses fishing pressure, protects the marine environment, frees up labor for other settlement wide tasks, and builds multistranded reciprocal social relationships.

The desire for empowerment through local control combined with a multigenerational experience-based distrust of external colonial and neocolonial institutions have caused settlements in the Exumas to create redundancies in their social and natural resource systems. Exumian lifeways bounce back after perturbations; thus leaving the people alive, holding resources, and able to thrive.



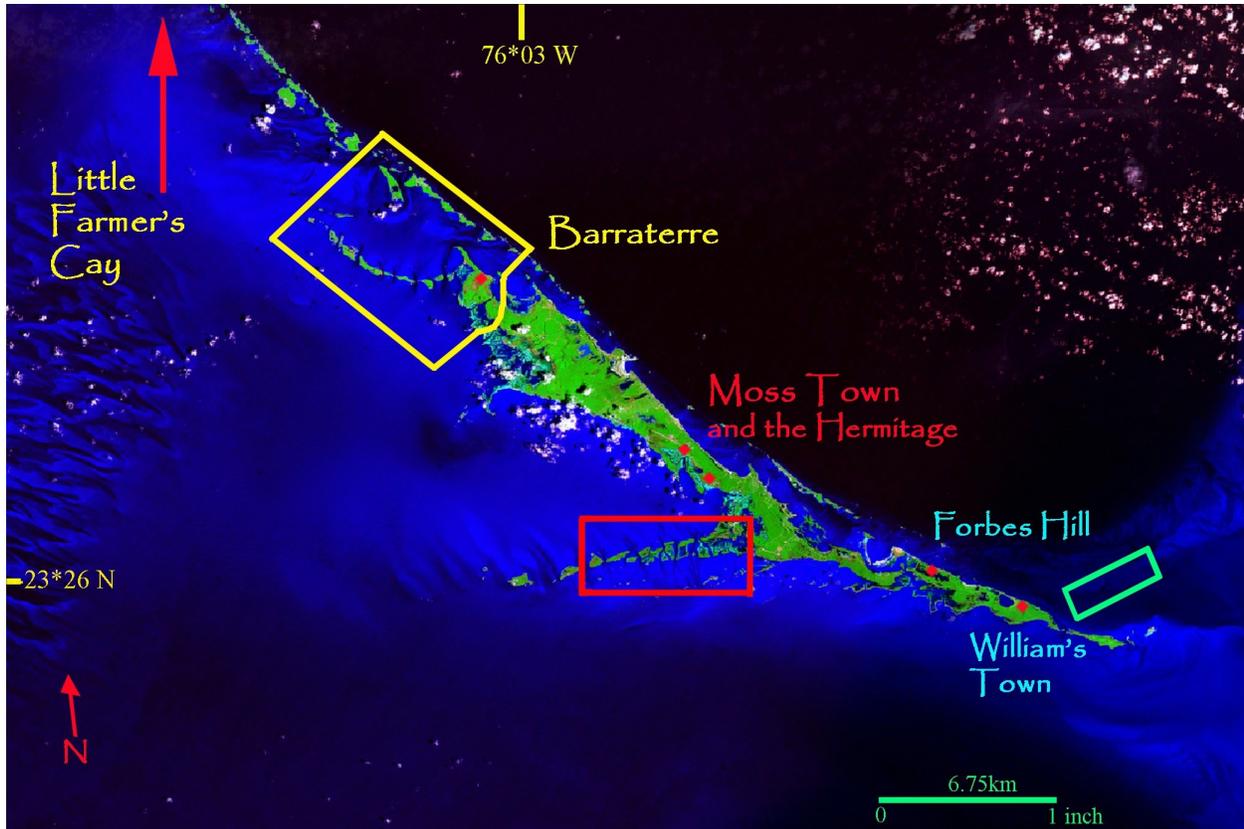


Figure 1 Satellite Imagery of the Exumas with Proposed MPAs Marked

Acknowledgements

We thank the Bahamas Department of Fisheries for approving this research, and the people of the Exumas Islands and Cays for their participation. Funding was provided by the NSF Biocomplexity in the Environment Program to the Center for Biodiversity and Conservation at the American Museum of Natural History. This study is the joint effort by the University of Arizona and the College of the Bahamas. The COB team included Professor Jessica Minnis, Kendra Arnett, Chervain Dean, Tarah McDonald, Ward Minnis, Tavarrie Smith, and Yasmin Skinner. The UofA team included Alex Carroll, Clinton Carroll, Fletcher Chmara-Huff, Jill Dumbauld, Heather Fauland, Richard Gilmour, Arin Haverland, Cory Jones, Shawn Kelley, Noreen Lyell, Aja Martinez, Amanda Murphy, Nathan O'Meara, Kathryn Payne, Terra Pierce, Peter Poer, Daniel Post, and Kathleen Van Vlack.

References Cited

Berkes, F., J. Colding, and C. Folke, editors. 2003. *Navigating social-ecological systems: building resilience of complexity and change*. Cambridge University Press, New York.

Comitas, L. 1964. Occupational multiplicity in rural Jamaica. *Proceedings from the American Ethnological Society*. American Ethnological Society, Washington, D.C.

Craton, M., and G. Saunders. 1992. *Islanders in the stream: a history of the Bahamian people. Volume One: from aboriginal times to the end of slavery*. University of Georgia Press, Athens, Georgia.

Craton, M., and G. Saunders. 1998. *Islanders in the stream: a history of the Bahamian people. Volume Two: from the ending of slavery to the twenty-first century*. University of Georgia Press, Athens, Georgia.

Eldridge, J. 1975. Bush medicine in the Exumas and Long Island, Bahamas: a field study. *Economic Botany* 29:307-331.

Halberstein, R. and A. Saunders. 1978. Traditional medical practices and medicinal plant usage on a Bahamian Island. *Culture, Medicine and Psychiatry*. 2:177-203.

Higgs, L. 1974. *Bush medicine in the Bahamas*. Nassau, Bahamas.

Holling, C. S. 1973. Resilience and stability of ecological systems. *Annual Review of Ecology and Systematics* 4:1-23.

Keegan, W. and S. Mitchell. 1986. Possible allochthonous Lucayan Arawak artifact distributions, Bahama Islands. *Journal of Field Archaeology* 13:255-258.

Morrison, L. W. 1997. The insular biogeography of small Bahamian cays. *Journal of Ecology* 85:441-454.

Nabhan, G. P. 1989. *Enduring seeds: Native American agriculture and wild plant conservation*. North Point Press, San Francisco, California.





Figure 2 Google Earth Image of the Forbes Hill Grubbing Area

Oldfield, M. L. and J. B. Alcorn. 1987. Conservation of traditional agro-ecosystems. *BioScience* 37:199-208.

Olssen, P. and C. Folke. 2001. Local ecological knowledge and institutional dynamics for ecosystem management: A study of Lake Racken Watershed, Sweden. *Ecosystems* 4: 85-104.

Payne-Jackson, A. and M. C. Alleyne. 2004. *Jamaican folk medicine: a source of healing*. University of the West Indies Press, Kingston, Jamaica.

Sawyer, W. H. Jr. 1955. Medicinal uses of plants by native Inaguans. *The Scientific Monthly*. 80: 371-376.

Sealey, N. E. 1994. *Bahamian landscapes*. Media Enterprises Ltd., Nassau, Bahamas.

Sheridan, R. B. 1976. The crisis of slave subsistence in the British West Indies during and after the American Revolution. *The William and Mary Quarterly* 33:615-641.

Stoffle, R., R. Toupal, and N. Zedeño. 2003. Landscape, Nature, and Culture: A Diachronic Model of Human-Nature Adaptations. Pages 97-114 in H. Selin, editor. *Nature Across Cultures: Views of Nature and the Environment in Non-Western Cultures*. Kluwer Academic Publishers, Dordrecht, The Netherlands.

Stoffle, R. and J. Minnis. 2007. Marine protected areas and the coral reefs of the traditional settlement in the Exumas, Bahamas. *Coral Reefs* 26(4): 1023-1032.

Taylor, N. 1921. Endemism in the Bahamian-flora. *Annals of Botany* 35:523-532.

Wilkie, L. and P. Farnsworth. 2005. *Sampling many pots: an archaeology of memory and tradition at a Bahamian plantation*. University Press of Florida, Gainesville, Florida .

