

Awardee: Kyle Gibson

Organization: University of Utah

Program Announcement: NSF 06-605

NSF Unit of Consideration: Social and Behavioral Sciences - Cultural Anthropology

**DISSERTATION IMPROVEMENT GRANT: INDIVIDUAL FACTORS IN THE CAUSE OF SUICIDE TERRORISM**

Budget and Duration Information: The project will begin July 15, 2008 last for one year.

PI Information: Kristen Hawkes email: hawkes@anthro.utah.edu

Co-PI Information: Kyle Gibson email: kyle.gibson@utah.edu

**Previous NSF Awards:**

2007-2009 Chimpanzee Reproductive and Physiological Aging NSF - \$140,645.00 Grant no. BCS – 0717886.

1988-1991 Hadza Subsistence, Sharing and Reproduction. NSF - \$150,000 (K. Hawkes - PI; J. O'Connell and N. Blurton Jones - Co-PI's) Grant No. BNS-8807436.

1982-1983 Ache Foraging. NSF - \$87,000. Grant No. BNS-8121209.

1983-1984 Ache Foraging. NSF - \$41,000. Grant No. BNS-8309834.

1985-1987 Subsistence, Sharing and Reproduction among the Hadza. NSF - \$130,000 (J. O'Connell - PI; K. Hawkes and N. Blurton Jones - Co-PI's) Grant No. BNS-8507859.

**Grantee Organization**

University of Utah

Address

DUNS Number

Employer ID

**Performing Organization**

University of Utah Department of Anthropology

**Other Federal Agencies: Department of Justice**

## **PROJECT SUMMARY**

### **1.1 - INTELLECTUAL MERIT**

Using demographic and evolutionary theory, this research explores the motivations of suicide terrorists. There are two goals; the first is to identify demographic characteristics of populations that lead them to produce suicide terrorists, the second is to identify characteristics of individuals that make them more likely to become suicide terrorists.

Demographic characteristics affect civil strife. Conflict and instability are positively associated with high numbers of young adults, rapid urban population growth, high numbers of young to older men, low levels of per capita cropland and freshwater, and differential growth rates among ethnic and religious groups (Cincotta, Engelman, and Anastasion 2003, Goldstone 2002, Mesquida and Wiener 1999). This research examines whether selected demographic attributes also lead to increases in suicide terrorism. For example, the families of individual suicide terrorists may receive social or monetary rewards based on their actions. It may be the case that those from large families are more likely to participate in suicide terrorism because the social payoffs for doing so are higher than they would be if they were from a small family. In this way, a local demographic factor like family size may influence whether an individual participates in suicide terrorism. Data from a number of news and terrorism databases will be aggregated in order to test this and other hypotheses regarding demographics and suicide terrorism,

### **1.2 BROADER IMPACTS**

This research will provide a better understanding of the motivations for suicide terrorism which will advance social science research on altruism, social status, and social instability. The research is cross-disciplinary, incorporating aspects of demography, biology, and cultural anthropology. It will create a new database of all known modern suicide terrorism events and synthesize various explanations of suicide terrorism in terms understandable for policy makers and non-scientists generally.

## PROJECT DESCRIPTION

### 2.1- INTRODUCTION

The events of September 11, 2001 brought suicide terrorism to the fore of American social and political life. The attacks were not the first instance of suicide terrorism against the United States but they were the deadliest ever. Americans were faced on that day with a collective sense of vulnerability unfelt since the fall of the Iron Curtain over a decade before. Researching suicide bombings is important because they account for the *majority* of casualties caused by terrorism even though they represent a *minority* of terrorist incidents (Atran 2006). Stopping even a small percentage of suicide missions could drastically lower the total number of casualties caused by terrorism.

Al Qaeda, Hamas, the Sri Lankan Tamil Tigers, and other organizations have successfully employed suicide terrorism to achieve strategic goals. From a strategic standpoint, there is a logical reason such groups use suicide terrorism - it works. Pape (2005) analyzed 315 suicide attacks from 1983 to 2003 and found that the strategic goals of terrorist groups behind them were reached in 50% of cases. This level of success would likely be impossible through conventional warfare because even well-organized and funded terrorist groups lack the means to engage in effective conventional warfare against even better-organized and funded state militias (Pape 2005). Much has been said about the *strategic* logic of suicide terrorism. We know why terrorist groups employ it, yet we know very little about why *individual* people volunteer to do it. A robust evaluation of suicide terrorism requires analysis at both the individual and strategic level. The goal of the proposed research is to test whether individual demographic factors like family size, operational sex ratio, and the ratio of young men to older men have the predictive power to determine who will become a suicide terrorist.

### 2.2 – THE STRATEGIC LOGIC OF SUICIDE TERRORISM

Several factors predict the strategic use of suicide terrorism. The first is the presence of foreign troops on “sacred” soil (Pape 2005). When foreign troops occupy an area that is considered the ethnic homeland of another, strife often ensues as an effort is made to expel the occupier. This is the case with the Israeli occupation of the Palestinian territories and the Sri Lankan occupation of Tamil territory in the northern part of the island. Another more subtle example is the American military “occupation” of Saudi Arabia. US troops have held positions on the Arabian peninsula since the beginning of Operation Desert Storm in 1990 and Saudi Arabia is a key ally in the region. No American military effort has been directed at the leadership or citizens of the country, yet the majority of al Qaeda suicide terrorists from 1995 to 2003 were Saudi (including 15 of the 19 September 11<sup>th</sup> hijackers (McDermott 2005)). Occupation, whether or not it involves violence directed at the occupied population, is a root cause of suicide terrorism (Pape 2003, Pape 2005).

Religious differences between the occupied and the occupying groups also contributes to suicide terrorism (Pape 2003, Pape 2005). Religious

differences make the “us versus them” tactics common in all conflicts more clear and serve to unify people against a common enemy (Keeley 1996, Pape 2005).

A third factor predicting the strategic use of suicide terrorism is that the government of the occupying nation is a liberal democracy (Pape 2005). Terrorist groups consider democratic governments easily swayed relative to authoritarian ones. The Madrid train bombings, for example, were carried out on March 11<sup>th</sup>, 2004, just three days before a national election. According to intercepted al Qaeda documents, this date was chosen so the bombings would have a maximal effect on the outcome of the election (Pape 2005). Their strategy worked flawlessly. Socialist candidate Jose Zapatero won the election and kept his word to pull Spanish troops from the Middle East. Authoritarian regimes also show less respect for human rights than democratic ones (Pape 2005). Rather than deal with dissent diplomatically, authoritarian leaders may simply eliminate troublesome populations with indiscriminate tactics like chemical weapons.

Fourth, suicide missions require widespread societal support. They are not used if society considers them morally or socially repugnant (Bloom 2005). Like other political and religious movements, terrorist organizations must compete for political and social support (Bloom 2005). If they lose “market share,” they also lose social and monetary benefits. For example, al Qaeda lost support throughout the Middle East following the Beslan school massacre that left 334 civilians dead, 186 of them children (Bloom 2005). Suicide missions cannot be effectively sustained without societal support. Organizations that use them in spite of this will lose market share and eventually disappear.

Last, suicide bombings are most often used in second iteration of a conflict . They are tactics of last resort used only after conventional channels have been exhausted (Bloom 2005). There were no suicide bombings during the first Gulf War, but there have been hundreds during the second. Suicide terrorism was not present in the first Chechen War or the first Palestinian Intifada, but came into use during the second iterations of each (Bloom 2005, Crenshaw 2007). Suicide missions are used only after other diplomatic and political means have failed to produce results.

In sum, five factors promote the use of suicide terrorism. These are listed in Table 1 alongside two columns indicating whether each is supported in datasets assembled by Pape or Bloom, the respective authors of two of the most complete scientific treatments of suicide terrorism. Plus signs indicate support, negative signs indicate no association was found, mixed plus and minus signs indicate overall support, but with a small number of exceptions, and blank cells indicate the association was not tested.

Table 1: Strategic Causes of Suicide Terrorism and Support for Each Strategic Cause

Strategic Cause	Pape 2005	Bloom 2005
Foreign Troops on Sacred Soil	+	+/-
Religious Difference	+	+
Democratic Opposition	+	+/-
Societal Support	+	+
Second Iteration of Conflict		+
Ineffective use of conventional tactics		+

### 2.3 – CHARACTERISTICS OF INDIVIDUAL SUICIDE TERRORISTS

What motivates individual suicide terrorists is not well understood. The stereotypical suicide bomber is uneducated, poor, male, and religiously fanatic to the point of insanity (Atran 2003a). The idea that suicide terrorism is irrational and random makes it a more effective strategic weapon and organizations which employ it actively perpetuate this notion as a form of psychological warfare (Atran 2003b). However, this portrayal of suicide terrorists is simply not supported by the data. Most suicide terrorists are not only educated, sane and middle-class, many are not even religious (Atran 2003a, Atran 2003b, Atran 2004a, Atran 2004b, Atran 2004c, Atran 2006, Bloom 2005, Hudson 1999, McDermott 2005, Pape 2003, Pape 2005). The Sri Lankan LTTE (also known as the Tamil Tigers) are the most prolific perpetrators of suicide terrorism in the world, yet they subscribe to a Marxist ideology that is markedly anti-religious (Atran 2003b, Pape 2005). While it can be argued Marxism and other strong ideologies resemble religions in some ways, religion in the strict sense is not a good indicator of who becomes a suicide terrorist (Atran 2003a).

A final misconception about suicide bombers is that they are all men. In reality, a significant minority are women. Women comprise the *majority* (71%) of PKK (Kurdistan Worker’s Party) suicide bombers and a sizeable minority (20%) of LTTE suicide bombers (Pape 2005). A broad explanation of suicide terrorism must incorporate these cases.

Table 2 shows how the research proposed here compares to what has been done by others. Plus signs indicate support, negative signs indicate no association was found, and blank cells indicate the association with suicide terrorism was not tested. Associations I propose to test are marked with an “x.”

Table 2: Individual Causes for Suicide Terrorism and Support for Each

Individual Cause	Pape (2005)	Bloom (2005)	Atran (2006)	Gibson (Proposed)
Psychological pathology	-	-	-	
Poverty	-	-	-	
Lack of education	-	-	-	
Manipulation and fictive kinship			+	
Kin selection				x
Social status or monetary payoffs		+		x
Young-old ratio				x
Operational sex ratio				x
Revenge		+	+	x
Rape				x

## 2.4 – THEORETICAL BACKGROUND

From an evolutionary perspective, suicide, no matter the reason for it, seems irrational. Yet this is true of many altruistic acts seen in nature. Since the 1960's a great deal of research has shown that many seemingly altruistic acts are "selfish" in evolutionary terms (Dawkins 1976). This is especially true when individuals make sacrifices that benefit family members. Hamilton (1963, 1964) showed that individuals should act altruistically if the cost incurred by the action is outweighed by the benefit it provides to kin. He formulated this relationship mathematically with an equation that would become known as "Hamilton's Rule":

$$C < rB$$

Where  $C$  is the cost of the action,  $r$  is coefficient of relatedness of the actor to the beneficiary and  $B$  is the benefit of the action. Hamilton's Rule has become the basis for an entire body of literature known as inclusive fitness theory.

The proposed research suggests suicide terrorism is motivated in part by inclusive fitness. For this to be true, the inequality above must be satisfied. Any present and future reproduction by suicide terrorists must be recouped by their kin. The more family members a suicide terrorist has, the more likely this becomes because the benefits of their actions befall more people.

The costs,  $C$ , to the reproductive prospects of the actor must also be considered. The less likely the suicide terrorist is to reproduce, the lower the cost of his or her sacrifice. For males, likelihood of reproduction can be estimated using the operational sex ratio (OSR) and young-old (YO) ratio of the

local population. The OSR is the number of reproductively aged men to women in a population. The higher the number, the more men to women and the greater the male competition for reproductive opportunities. A positive association between OSR and suicide terrorism has been found in Palestine (Blackwell 2005). One of the aims of the proposed research is to test for a link between OSR and suicide terrorism elsewhere.

Young-old ratio is like OSR in that it succinctly describes a broad demographic trend with a simple metric. The ratio is the measure of men under 30 years of age to men over 30 in a population (Mesquida and Wiener 1999). Like OSR, the YO ratio reflects male-male competition within a population. As the number of young males relative to old ones increases, so does competition and violence. Mesquida and Wiener (1999) showed that YO ratio accounts for over a third of the variance in both the frequency and intensity of conflicts. The proposed research will test for a link between YO ratio and suicide terrorism.

Family size may motivate female suicide terrorists just as it does males. But OSR and YO ratio are not applicable to females because they proxy male-male competition. I suggest the female motives for suicide terror are rooted in revenge. There is anecdotal evidence to support this. Many female terrorists cite the death of a close friend or family member at the hands of an occupier as their reason for participating in a suicide operation (Bloom 2005). Stories of rape are used in the same way (Bloom 2005, Pape 2005). If rape victims face social stigma and decreased marriage prospects, the costs of self sacrifice fall along with the odds of future reproduction.

In sum, not all suicide bombers or groups that employ suicide terror are religious. Many of those who kill themselves to kill others do so not in the name of God or salvation, but for some other reason. Inclusive fitness theory, male-male completion, and revenge each provide a framework in which suicide terror “makes sense.”

## 2.5 - HYPOTHESES

I propose social status and inclusive benefits accrue to suicide terrorists. This generates five hypotheses.

### 2.5.1 – Hypothesis One

*H<sub>alternative</sub>*: *Suicide bombers come from larger than average families for their region.*

*H<sub>null</sub>*: *Suicide bombers come from families of average size for their region.*

Social payoffs are evident wherever suicide terrorism exists. For example, following a successful suicide attack by one of their members, Hamas creates a great deal of pomp and circumstance. This is done in remembrance of the bomber and to support his or her family. Photographs are published in local newspapers, parades are often held, and sometimes the family is given a cash payment (Bloom 2005). Much the same is true for the Tamil Tigers. Such social and material benefits to kin are likely to motivate suicide terrorists.

Large families should increase the inclusive fitness value of suicide terror because of the higher absolute benefits received by kin. If, for example, each family member of a suicide terrorist receives a social status payoff as the result of his or her martyrdom, a bomber with eight siblings will recoup eight times as much as a bomber with one sibling.

Testing this hypothesis requires data on average family size which will come from the United Nations Common Database (United Nations 2007). This database reports average family size by country. In all cases, demographic data of the highest resolution available (in terms of geographic location and ethnic identification) will be used for hypothesis testing. In some cases, data are only available by individual country, but in most instances, data on family size and composition are available for specific geographic regions, states, ethnic groups, and so on. Data on family size for individual terrorists will come from Freedom of Information Act Requests to the Federal Bureau of Investigation, Department of Justice, and Department of Homeland Security, LexisNexis searches, and the terrorism databases listed in the supplemental information.

#### 2.5.2 – Hypothesis Two

*H<sub>alternative</sub>*: *Suicide terrorism is positively associated with operational sex ratio.*

*H<sub>null</sub>*: *Suicide terrorism is not associated with operational sex ratio.*

Male reproduction is constrained by the number of reproductively aged females and competing males in a population. Where the operational sex ratio is high, male reproductive prospects are low. This lowers the individual fitness cost of suicide terror because reproduction is less likely for the individual. I hypothesize that suicide terrorists come from areas with high operational sex ratios relative to the regional norm. To test this, I will gather demographic data from the United Nations Common Database (United Nations 2007) and more localized data when available (e.g. Kearney and Miller 1985). I will use Freedom of Information Act Requests to the Federal Bureau of Investigation, Department of Justice, and Department of Homeland Security, LexisNexis searches, and the terrorism databases listed in the supplemental information to establish the birthplace and last known residence of each terrorist. I will then calculate the OSR for each and compare them to the average for the region.

#### 2.5.3 - Hypothesis Three

*H<sub>alternative</sub>*: *Suicide terrorism is positively associated with young-old ratio.*

*H<sub>null</sub>*: *Suicide terrorism is not associated with young-old ratio.*

A high young-old ratio indicates high male-male competition and lower reproductive prospects for young men. I hypothesize that suicide terrorists come from areas with high YO ratios relative to the regional norm. I will test this hypothesis using the same method outlined in the previous hypothesis, but substituting YO ratio for OSR.

#### 2.5.4 - Hypothesis Four

*H<sub>alternative</sub>: Female suicide terrorism is motivated by revenge.*

*H<sub>null</sub>: Female and male suicide terrorism are motivated by the same things.*

Anecdotally, it appears that many female suicide terrorists have lost a close family member at the hands of an occupying force. I hypothesize that female suicide terrorism is largely motivated by revenge, while in males it is motivated by something else (e.g. mating competition). To test this, I will review and code the final statements left behind by terrorists. These often plainly detail the motivations for each act. I will then group the motivations by sex and test for significant differences in the number of times they are mentioned in each statement.

#### 2.5.5 - Hypothesis Five

*H<sub>alternative</sub>: Female suicide terrorism is motivated by rape.*

*H<sub>null</sub>: Female suicide terrorism is not motivated by rape.*

There is also anecdotal evidence that rape has a role in motivating female suicide terrorism (Bloom 2005). Pape (2005) described the life of one Black Tigress named Dhanu, who, in 1991, killed herself along with Indian Prime Minister Rajiv Gandhi. Five years before her suicide, Indian soldiers occupying Sri Lanka killed four of her brothers and raped her (Pape 2005). Tamil culture prohibits marrying rape victims, which left Dhanu facing grim marriage prospects and no chance of leading a normal Tamil life. Females facing little or no chance of reproduction may increase their inclusive fitness through martyrdom.

Of course, knowing whether a woman has been raped could prove difficult or impossible - especially if she wants the fact kept secret. Also, stories of rape may be used purely as propaganda. For this reason, this hypothesis will be regarded as exploratory. Data will come from Freedom of Information Act Requests to the Federal Bureau of Investigation, Department of Justice, and Department of Homeland Security, LexisNexis searches, and the terrorism databases listed in the supplemental information.

## 2.6 – SUITABILITY OF THE METHODS EMPLOYED

Data on the identities of suicide terrorists will come from a series of online databases. Demographic information will be gathered from LexisNexis news searches, Freedom of Information Act (FOIA) requests, and library research at the United States National Archives in Washington DC. Information about family size and birth order exists in these records, but it has not yet been assembled into any single dataset (Pape 2007, personal communication). Suicide terrorism is a public act and the identities of perpetrators are publically known, therefore subject confidentiality is not a serious concern. This said, the proposal has been submitted to the University of Utah Institutional Review Board at their request. The demographic data are likely to be reliable because there is little, if any, subjectivity in their measurement. Independent variables are listed in Table 3

along with the estimated number of cases available and a short description of each. The dependent variable is simply participation in suicide terrorism. Because the dependent variable is binary, statistical analysis will comprise of generalized linear modeling (GLM) and logistic regression using STATA 10.

Table 3: Independent Variables

Independent Variables	Estimated N	Used to Determine
Birth year	400	Age
Sex	400	Sex
Death year	500	Age at death
Country of origin	400	OSR and YO ratios at birth
Number of siblings	150	Inclusive fitness effects of suicide mission
Birthdates of siblings	100	If kin were alive at time of suicide mission
Last known residence	300	OSR and YO ratio of last known residence
Marital status	300	Inclusive fitness effects of suicide mission
Number of children	200	Inclusive fitness effects of suicide mission
Age of children	150	Inclusive fitness effects of suicide mission

## 2.7 - QUALIFICATIONS OF THE INVESTIGATOR AND GRANTEE ORGANIZATION

The author is a doctoral student in anthropology at the University of Utah. His PhD chair other advisory committee members have decades of experience using evolutionary approaches to study sex differences, warfare, and conflicts of interest.

## 2.8 - EFFECTS OF THE ACTIVITY ON THE INFRASTRUCTURE OF SCIENCE

This study will give us a better understanding of suicide and suicide terrorism. It may also contribute to our understanding of costly signaling, violence, warfare, revenge, altruistic behavior, religion, and collective action.

## 2.9 - REFERENCES CITED

- Atran, S. 2003a. Genesis of Suicide Terrorism. *Science* 299:1534-1539.
- . 2003b. *The Strategic Threat From Suicide Terror*. AEI-Brookings Joint Center for Regulatory Studies.
- . 2004a. The Jihadist Mutation. *Jamestown Terrorism Monitor* 2:1-4.
- . 2004b. Mishandling Suicide Terrorism. *The Washington Quarterly* 27:67-90.
- . 2004c. Turning Out Hell's Harpists.
- . 2006. The Moral Logic and Growth of Suicide Terrorism. *The Washington Quarterly* 29:127-147.
- Blackwell, A. D. 2005. "Terrorism, Heroism, and Altruism: Kin selection and socio-religious cost-benefit scaling in Palestinian suicide attacks," pp. 30. Eugene, OR.
- Bloom, M. 2005. *Dying to Kill: The Allure of Suicide Terror*. New York: Columbia University Press.
- Cincotta, R. P., R. Engelman, and D. Anastasion. 2003. *The Security Demographic: Population and Civil Conflict After the Cold War*. Population Action International.
- Crenshaw, M. 2007. Explaining Suicide Terrorism: A Review Essay. *Security Studies* 16:132-162.
- Dawkins, R. 1976. *The Selfish Gene*, 1 edition. New York and Oxford: Oxford University Press, Inc.
- Goldstone, J. A. 2002. *Journal of International Affairs* 56:3-22.
- Hamilton, W. D. 1963. The Evolution of Altruistic Behavior. *American Naturalist* 97:354-356.
- . 1964. The Evolution of Social Behavior. *Journal of Theoretical Biology* 7:1-52.
- Hudson, R. A. 1999. *The Sociology and Psychology of Terrorism: Who Becomes a Terrorist and Why?* Federal Research Division: Library of Congress.
- Kearney, R. N., and B. D. Miller. 1985. The Spiral of Suicide and Social Change in Sri Lanka. *The Journal of Asian Studies* 45:81-101.
- Keeley, L. H. 1996. *War Before Civilization: The Myth of the Peaceful Savage*. New York: Oxford University Press.
- McDermott. 2005. *Perfect Soldiers: The 9/11 Hijackers - Who They Were and Why They Did It*. New York: HarperCollins Publishers.
- Mesquida, C. G., and N. I. Wiener. 1999. Male Age Composition and Severity of Conflicts. *Politics and the Life Sciences* 18:181-189.
- Pape, R. A. 2003. The Strategic Logic of Suicide Terrorism. *American Political Science Review* 97:1-19.
- . 2005. *Dying to Win: The Strategic Logic of Suicide Terrorism*. New York: Random House Trade Paperbacks.
- United Nations. 2007. "United Nations Statistics Division Common Database," vol. 2007. New York, NY: The United Nations.

## SUPPLEMENTAL INFORMATION

### 3.1- BIOGRAPHICAL SKETCHES

Kristen Hawkes

#### **Professional Preparation**

Iowa State University	Sociology and Anthropology	BS, 1968
University of Washington	Anthropology	MS, 1970
University of Washington	Anthropology	PhD, 1976

#### **Appointments**

2005-present	Collaborative Scientist, Division of Psychobiology, Yerkes Nat'l Primate Research Center
2002-2003	Fellow, Center for Advanced Study in the Behavioral Sciences, Stanford University
2001-present	Distinguished Professor, Department of Anthropology, University of Utah
1996	Chair, Department of Anthropology, University of Utah,
1987-present	Professor, Department of Anthropology, University of Utah
1980	Associate Professor, Department of Anthropology, University of Utah
1976	Assistant Professor, Department of Anthropology, University of Utah
1973	Instructor, Department of Anthropology, University of Utah
1970	Instructor, Highline Community College
1969	Teaching Assistant, Teaching Associate, University of Washington

#### **Publications**

- Hawkes, K. 2004 Mating, parenting and the evolution of human pair bonds. In *Kinship and Behavior in Primates*, edited by B. Chapais & C. Berman, pp 443-473. Oxford University Press.
- Hawkes, K. 2003 Grandmothers and the evolution of human longevity. *American Journal of Human Biology* 15:380-400.
- Hawkes, K. & R. Bliege Bird 2002 Showing off, handicap signaling and the evolution of men's work. *Evolutionary Anthropology* 11:58-67.
- Hawkes, K., J. F. O'Connell & N. G. Blurton Jones 2001 Hunting and nuclear families: some lessons from the Hadza about men's work *Current Anthropology* 42(5):681-709.
- Hawkes, K., J. F. O'Connell, N. G. Blurton Jones, H. Alvarez & E. L. Charnov 2000 The grandmother hypothesis and human evolution. In *Adaptation and Human Behavior: An Anthropological Perspective*, edited by L. Cronk, N. Chagnon & W. Irons, pp. 231-252. New York: Aldine de Gruyter.
- Blurton Jones, N. G., F. Marlowe, K. Hawkes & J. F. O'Connell 2000 Hunter-gatherer divorce rates and the paternal provisioning theory of human monogamy. In *Adaptation and Human Behavior: An Anthropological*

- Perspective*, edited by L. Cronk, N. Chagnon & W. Irons, pp. 65-84. New York: Aldine de Gruyter.
- Hawkes, K. 1992 Sharing and collective action. In *Evolutionary Ecology and Human Behavior*, edited by E.A. Smith & B. Winterhalder, pp. 269-300. New York: Aldine de Gruyter.
- Hawkes, K. 1991 Showing off: Tests of an hypothesis about men's foraging goals. *Ethology and Sociobiology* 12:29-54.
- Hawkes, K. 1983 Kin selection and culture. *American Ethnologist* 10:345-363.
- Hawkes, K., J. F. O'Connell & N. G. Blurton Jones 1989 Hardworking Hadza Grandmothers. In *Comparative Socioecology: The Behavioural Ecology of Humans and Other Mammals*, edited by V. Standen & R.A. Foley, pp. 341-366. London: Basil Blackwell.

### **Synergistic Activities**

- 2006-present Center on Aging, Member, University of Utah
- 2002 Co-Organizer Advanced Seminar On The Evolution Of Human Life Histories School of American Research, Santa Fe, November 2-8.
- 2002 Rosenblatt Prize, University of Utah
- 2002 Elected member, National Academy of Sciences
- 1985-present Science and Grants Executive Committee Member, Leakey Foundation

### **Collaborators and Other Affiliations**

James F O'Connell, U of Utah; Nicholas Blurton Jones, UCLA; Richard Paine, U of Utah; John Fleagle, SUNY Stony Brook; Ken R Smith, U of Utah; Shannen Robson, U of Utah; Carel van Schaik, U of Zürich. Jones Kirtly P, U of Utah; Lary C Walker, Yerkes NPRC Emory U; Dan Anderson, Yerkes NPRC Emory U; Jim Herndon, Yerkes NPRC Emory U; Agnés Lacreuse, Yerkes NPRC Emory U & U Mass Amherst

### **PhD Students Overseen in the Last Five Years**

Helen Alvarez; Shannen Robson; Christopher Parker; Kyle Gibson; Earl Keefe; Jaqueline Rabb; Mercedes Ward; Robert MacKinnon; Joshua Trammell; Shannon Arnold

### **Thesis Advisor**

James B. Watson, University of Washington, Professor Emeritus

### Kyle Gibson

#### **Professional Preparation**

University of Nebraska-Lincoln	Anthropology and English	BA, 2000
University of Nebraska-Lincoln	Anthropology	MA, 2004
University of Utah	Anthropology	PhD, expected 2009

### **Appointments**

- 2007-2008 Instructor, Human Universals, Department of Anthropology, University of Utah
- 2006-2007 Graduate Teaching Assistant, Department of Anthropology, University of Utah
- 2005-2006 Graduate Assistant, Division of Occupational Therapy, University of Utah
- 2002-2004 Graduate Teaching Assistant, Department of Anthropology and Geography, University of Nebraska-Lincoln

### **Papers**

- Gibson, K.  
(2007) "Parental Investment in Families With Both Adopted and Genetic Children" Submitted to *Evolution and Human Behavior*.
- Gibson, K.  
(2005) "Punitive Behavior in eBay Auctions" *Nebraska Anthropologist*. 20:23-28. University of Nebraska – Lincoln.
- Gibson, K.  
(2004) "Evolutionary Theory in Anthropology: Providing Ultimate Explanations for Human Behavior" *Nebraska Anthropologist*. 19:1-3. University of Nebraska – Lincoln.

### **Collaborators and Coauthors**

Christopher Parker University of Utah

### **Graduate Advisors**

Kristen Hawkes, Department of Anthropology, University of Utah  
Henry Harpending, Department of Anthropology, University of Utah  
Elizabeth Cashdan, Department of Anthropology, University of Utah  
Douglas Jones, Department of Anthropology, University of Utah  
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Patricia Draper, Department of Anthropology and Geography, University of Nebraska-Lincoln  
Lynn White, Department of Sociology, University of Nebraska-Lincoln

### **Thesis Advisors**

Kristen Hawkes, Department of Anthropology, University of Utah  
Raymond Hames, Department of Anthropology and Geography, University of Nebraska-Lincoln

### **3.2 - DATA DISSEMINATION**

The data will be made publically available in a Ph.D. thesis at the University of Utah at the end of the study, sometime between May and August, 2009. The data will also be published online within two years from the end of the study.

**BUDGET**

Research at the National Archives in Washington D.C for 14 days.

Airfare	\$800
Lodging	\$2000
Food	\$500

Freedom of Information Act (FOIA) Requests: \$44 per hour X 150 hours = \$6600

TOTAL = \$9900