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FROM THE ORINOCO TO
SORORITY ROWSearching for a field site as an evolutionary
anthropologist*Nicole Hess*

Evolutionary anthropologists are researchers who invoke evolutionary principles in developing and testing hypothesized relationships among biological, psychological, social, and ecological variables. Methods can include the collection of quantitative data through, for example, experiments, surveys, anthropometric and health measurements, social network analysis (SNA), genetic sequencing, or even mathematical modelling. Evolutionary anthropologists can also collect qualitative data using ethnographic and interviewing methods. The common denominators in evolutionary anthropology are studying humans and using evolutionary theory to develop testable hypotheses about them.

An additional, highly desirable, feature of evolutionary anthropological research is that it be conducted among people who live under ecological conditions similar to those regularly encountered by humans in the ancestral past. The logic is, if the physical and behavioural adaptations possessed by humans evolved while ancestral humans lived as foragers in communities probably no bigger than 100 individuals, then these adaptations can best be elucidated by studies conducted among the few remaining small-scale hunting and gathering populations that exist in the world today.

As a graduate student in evolutionary anthropology the University of California, Santa Barbara (UCSB), I had questions about the evolution of friendship and cooperation among human females – a topic that I felt had been overlooked by previous researchers in evolutionary anthropology and other evolutionary social sciences (e.g. the closely related field of evolutionary psychology). Evolution-minded researchers were convincingly arguing that cooperation in males was actually a form of competition – cooperative competition. In the struggle to reproduce, ancestral human males competed over mates. Because multiple, cooperating aggressors are more likely to win contests than individual aggressors, men who formed coalitions won more fights and mates, and their resulting offspring inherited

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1 this inclination to form coalitions. Researchers thought this might account for why
 2 human males experience coalitional sentiments and engage in cooperatively com-
 3 petitive behaviours.

4 This male-oriented theory for the evolution of cooperation and coalitional
 5 psychology, to me, could not sufficiently explain the mental processes and behavi-
 6 ours underlying human female cooperative competition. Across small-scale soci-
 7 eties, preparation for and engagement in coalitional physical aggression (e.g. raids
 8 or warfare) are almost exclusively male activities.¹ However, in my observation,
 9 women and girls, too, experience strong sentiments regarding their interactions
 10 and relationships with same-sexed others, including close allies and clear rivals.
 11 Do the feelings, thoughts, and behaviours underlying female competition,
 12 cooperation, and friendship also have an evolutionary explanation? And, does
 13 female cooperation serve competitive or aggressive goals? A few evolutionary
 14 researchers had already proposed that female humans form bonds with one another
 15 towards benign ends. For example, the often-cited “Tend-and-Befriend” account
 16 of human female bonds (Taylor et al., 2000) suggests that women and girls
 17 cooperate in mutual care and nurturance, and that friendships are an extension of
 18 maternal care, which has obvious deep evolutionary roots for all mammals.
 19 Another evolutionary account of female cooperation argued that close bonds might
 20 function to protect females from male aggression. These accounts gelled well with
 21 an assumption that social scientists had been making for at least a century: whereas
 22 males are aggressive, females are *nice*, and use aggression defensively if at all.

23 The assumption in the social sciences of the aggressive male and the nurturing
 24 female persisted until the 1970s, when social scientists began to recognize patterns
 25 of another kind of aggression displayed by children. This suite of behaviours
 26 appeared to be aimed at harming others, but did not involve the use of physical
 27 aggression to inflict bodily damage, such as hitting and pushing. Gossip, ostrac-
 28 ism, criticism, dirty looks, and giving the silent treatment are examples of these
 29 nonphysical forms of aggression. Three constructs encompassing these behavi-
 30 ours include *indirect aggression*, *relational aggression*, and *social aggression*
 31 (reviewed in Hess and Hagen, 2019). Most studies on these forms of nonphysical
 32 aggression have focused on children in Western school contexts. Based on reviews
 33 of the literature, including meta-analyses, what we know about nonphysical
 34 aggression is that, in children, whereas males use physical aggression much more
 35 than females, females use nonphysical aggression slightly more than males. We
 36 also know that, for males and females, using nonphysical aggression is strongly
 37 correlated with using physical aggression. Emotional and social maladjustment
 38 (e.g. depression and criminal activity) are not strongly or consistently predicted by
 39 patterns of nonphysical aggression. Many researchers point out limitations of even
 40 these robust findings, however. Physical aggression is often conspicuous and
 41 measurable, where the victim and the aggressor can be identified. Nonphysical
 42 aggression is often quiet, hard to spot, circuitous, and often intentionally con-
 43 cealed. Does what has been measured accurately represent what really happens?
 44 In addition, research on nonphysical aggression has largely included reports of

perpetration and victimization by teachers, parents, peers, and oneself, and most studies have been conducted on children in Western societies; do findings generalize outside these populations?

Nonphysical aggression seemed to have a lot in common with the phenomena of female coalitions, competition, and friendship; I wanted to explore these topics in adults in non-Western societies. As an undergraduate at UCLA exploring potential graduate programmes, I emailed several professors with my thoughts on female competition, asking for their insights. One response from a very esteemed feminist evolutionary anthropologist came back in a typed, snail-mailed letter. She offered encouragement and felt this was indeed an understudied topic among evolutionary researchers. She also issued a firm request that I not conduct my research among undergraduate women in the US.

In the winter of 1998, I joined two UCSB PhD students (one of whom I later married) and an advanced undergraduate for a one-month trip to Venezuela to work with two indigenous Amazonian groups. The Yanomamö and the Ye'kwana subsisted using horticultural practices and by hunting forest animals and fishing. These were small-scale cultures, and working with them would fall right in line with what was expected of an evolutionary anthropologist. At the time, I had not yet developed my theory for female friendship as competition, but I needed to move forward with finding a place to conduct longer-term research in the future.

There was a lot of physical, logistical preparation required for this visit to the Venezuelan Amazon – pricey plane tickets, arrangements for travel within Venezuela, several vaccinations, various research-relevant supplies like skinfold callipers, cameras and a lot of camera film to be used for documenting dental health (this was prior to the age of digital photography), entertainment for downtime (e.g. a deck of playing cards), etc. We brought much of our nutrition in the dense forms of multivitamins, protein bars, and beef jerky. Sriracha sauce and salt were to be our main sources of flavour. We planned to buy bulky carbs like rice and pasta once we got into Venezuela, reserving precious, limited space in our travel gear for other items. Having briefly attended a field school in Costa Rica to study the behaviour of nonhuman primates, I already had some of the clothing and equipment, such as waterproof notebooks and pens.

Our small team of Santa Barbara anthropologists was going to conduct research at the invitation of Jaime Turón, the elected mayor of the Alto Orinoco Municipality of the state of Amazonas, who was a Ye'kwana. Turón was a friend of UCSB professor Napoleon Chagnon, the well-known anthropologist who had conducted decades of research with the Yanomamö in Venezuela and Brazil, whom he famously described using a term the Yanomamö used to describe themselves, “fierce”. Working with local indigenous leaders in the Santa Barbara area, Chagnon and several of his graduate students had hosted Turón and his associates, and Turón was returning the favour by inviting Chagnon and his students to work in Amazonas. I was lucky to get to join this trip.

The four of us assembled our supplies in eight large Action Packer™ boxes (with padlocks), as we each had two free check-ins for our flights. All eight were

1 packed to the maximum weight of fifty pounds. Over the course of the trip, we
 2 came to refer to these unwieldy boxes as “cajas”, uttered with fatigue and exas-
 3 peration. The hard, black, plastic boxes with the grey lids and the snap-on red
 4 handles had also functioned some nights as our beds while in Venezuela. We each
 5 had a half of one *caja* for personal belongings, with the rest of the space reserved
 6 for communal goods. (Among the personal items, some among us may or may not
 7 have smuggled in some arguably-worth-its-volume chocolate.) We transported a
 8 fold-up solar panel and cumbersome motorcycle battery to charge our sole laptop
 9 computer. The devices were to be assembled when we got to our field site, and we
 10 did not have a streamlined, pre-manufactured charger that one would use today.
 11 We had also procured tens of thousands of dollars-worth of medical supplies from
 12 Direct Relief International, conveniently headquartered in Santa Barbara, which
 13 took up much of the communal space. The wholesale value of the mostly first aid
 14 supplies was low (we students contributed substantially to their purchase), but the
 15 items were quite valuable on the market and very much needed by people in rural
 16 areas with low access to medical care. The medical items were ones requested by
 17 Jaime Turón, and included bandages, gauze, antiseptics, and, most importantly,
 18 worm pills: Albendazole is a fast-acting anti-helminthic that rids the body of
 19 ascariasis, giardiasis, filariasis, and other parasitic worms, and we had enough to
 20 deworm villages. We would be donating these supplies to a clinic in the area.

21 I didn’t speak Yanomamö or Ye’kwana and was unlikely to learn either suffi-
 22 ciently to communicate with locals in their indigenous tongues. But, many spoke
 23 the language of their colonizers, Spanish. My knowledge of Spanish vocabulary
 24 was mediocre, and of Spanish grammar quite small, but my pronunciation was
 25 great, having spent a fair amount of my early childhood listening to my Mexican
 26 grandmother and great-grandmother gossiping about the neighbours. It was
 27 unlikely that I would be able to study gossip and female conflict and friendship by
 28 directly interviewing informants, and my plan was to simply get some research
 29 experience assisting my colleagues with their projects, which included simple
 30 measures of health, like height, weight, and skinfold thickness (delicate callipers
 31 and a very accurate and huge scale were also in the *cajas*). Our research protocols
 32 had been approved by UCSB’s Internal Review Board (IRB). I was going to
 33 observe women and girls while assisting in collecting the health data, in the hope
 34 I would gain some insight into female friendship. I had read up on the Yanomamö
 35 in Chagnon’s publications, and the Ye’kwana in Ray Hames’ PhD dissertation.
 36 We knew that patriarchal views were strong in local indigenous groups as well as
 37 the governmental and religious groups that interacted with the Yanomamö and
 38 Ye’kwana (members of the Venezuela government, Catholic missionaries,
 39 and Protestant missionaries). So, my partner and I wore silver wedding bands and
 40 pretended to be married in order to avoid the problems associated with being a
 41 young, single, foreign woman in a new place.

42 We had chosen our travel time to fit in over UCSB’s winter break to avoid
 43 missing teaching assistant (TA) responsibilities. When we arrived in Venezuela in
 44 December, 1998, Hugo Chávez (a Venezuelan military officer turned fierce leftist

politician who sought to bring about a socialist revolution in Venezuela beginning in the 1990s) was running for president of Venezuela. But we didn't consider whether Venezuela's upcoming election would have an impact on us – we would be out in a remote region of the Upper Orinoco at the invitation of local leaders and did not expect the federal government to have any concern with us.

We first flew from Los Angeles to Florida, where our *cajas* did not get automatically checked through. This was prior to 9/11, and luggage check-in was a relatively simpler process. However, our suspicious-looking, unassembled motorcycle battery-solar panel-computer complex had to be examined by multiple parties, which meant unpacking our *cajas* and repacking them. This would be only the first time our belongings were searched.

Our next stop was Caracas, Venezuela's capital. Caracas had a lot of graffiti, much of it commenting on the current political state: there was perceived corruption by the rulers, and presidential candidate, Hugo Chávez, intended to bring change. There were also people in the streets of Caracas vocalizing their dissatisfaction with the current government. We checked into a hotel, then went to a university to meet a contact from whom we purchased snake anti-venom. The next day, we took a domestic flight from Caracas to Puerto Ayacucho, the capital of the state of Amazonas. Puerto Ayacucho's airport had a gift shop selling items made by indigenous groups, including baskets, beaded necklaces, painted pots, and small, carved wooden sculptures of local fauna, like monkeys and jaguars. On the airport's walls hung several portraits of indigenous individuals in traditional dress, many of whom were young women, painted on black velvet. Our host, Turón, and his affiliates met us at the airport and escorted us to Puerto Ayacucho's nicest hotel. Over the next few days, while we waited to be issued our research permits, we waited at the hotel, and ate a few meals around town (mostly fish and rice, and I was convinced the extremely bony whole fish were piranha). We also visited a local swimming spot, some shallow rapids that flowed over immense, smooth boulders. We were accompanied by Jaime Turón's son and some other men much of the time, and our hosts clearly wanted us to enjoy their home. None of us were interested in swimming – a bathing suit was not packed with the two fast-drying, mosquito-resistant outfits in my limited *caja* space. I was just antsy to collect some data, but, looking back, I think this was a time when a more experienced and far-sighted anthropologist would have taken the time to schmooze. Regardless, I was female, and probably would not have gotten very far in terms of making long-term connections.

After a few days of hanging around Puerto Ayacucho, we received our permits. We gathered our immediately needed belongings and headed to Toki, Jaime Turón's natal village. Toki is a large, riverside Ye'kwana village with its own, small airplane landing strip. Our team of four flew in two small Cessnas, each of which could seat a pilot and two passengers. Because the planes were so small and weight was a factor, we shipped some of our *cajas* by boat to Toki, including our bulkier food items. Worried the medical supplies might be stolen on the boat journey, we arranged to have them flown in later. We were graduate students

1 paying out of pocket for the trip, and boat transport was much cheaper than flying,
2 but it was also more dangerous, as the segment of the Orinoco that flowed past
3 Puerto Ayacucho bordered Colombia on the west. FARC (Fuerza Alternativa Rev-
4 olucionaria del Común) was a guerrilla movement that was strong in Colombia at
5 the time, and the trade of illegal drugs in the area was a concern. We had to send
6 our *caja* padlock keys with the boat cargo, as the *cajas* were certain to be searched
7 for drugs.

8 We arrived in Toki by way of its bumpy, unpaved landing strip. On the walk to
9 the village from the landing strip, we were shown some large tanks holding imma-
10 ture fish caught in the river; once large enough, they would be food for the vil-
11 lagers. We next passed the village's largest and centrally located communal
12 building, where important meetings took place, but also where children gathered
13 to watch videos on the village's only generator-driven TV/VCR setup. The five or
14 six times we walked by the communal building over the next few days, we noticed
15 that village children were watching the same, repeating ten-minute clip of a Holly-
16 wood action film, *Legionnaire*; the kids, gathered close around the screen, were
17 mesmerized by Jean-Claude Van Damme and the explosions. Our team was placed
18 temporarily in the house of a family that was away from the village for several
19 days, and firmly reminded to put a lock on the door to protect our belongings when
20 we left the house. (The lock, fit for a suitcase, was symbolic if anything.) Posts
21 inside the house supported *chinchorros* (hammocks), used for sleeping, sitting,
22 and lounging. *Chinchorros* were quite comfortable once the right contortions were
23 achieved. An outhouse was several yards from the house and had its own protec-
24 tive lock. Our closest neighbours were several feet away in a similar building, with
25 other buildings located more distantly apart. It was a short walk to the river's edge
26 where we would acquire drinking and cooking water (to be sterilized with iodine
27 tablets), and where we would bathe. Every afternoon at about 3 P.M., a short storm
28 would pass through the village, bringing a breeze and coolness to an otherwise
29 heavy, hot atmosphere. I would periodically see two little girls walking past our
30 house, sometimes holding hands. There were my female friends. This would be
31 my field site. Sadly, it was all downhill from there.

32 After several days in Toki, it came time to take a weekly dose of our anti-
33 malaria medication. Appropriate malaria medications vary by location, and, at the
34 time, mefloquine was the most effective prophylactic for the region. Our food had
35 not arrived by boat and we were eating the few items of food we'd stashed into our
36 Cessna-transported *cajas* – teriyaki beef jerky and dark chocolate for me. I
37 swallowed my huge, chalky mefloquine tablet with a little food and a lot of water,
38 then went down for a nap during the afternoon's cooling storm. I woke up just as
39 the storm ended and the heat and humidity resumed. I was gripping my blanket,
40 and felt fearful and clumsy, but also strangely aggressive. The physical objects
41 around me appeared to be in disarray because my eyes were not keeping up when
42 my head turned. Jaw clenched, nauseated, and breathing erratically, I stood up
43 unsteadily, uncertain if I was dreaming. This lasted for several minutes and was
44 probably the paranoia that is sometimes a side effect of mefloquine; hallucinations

are another side effect. Coincidentally, this experience happened right as some other visitors were arriving in Toki – visitors who brought the beginning of the end of our short venture to the field.

During the time that we were travelling from Caracas to Toki, Hugo Chávez had been elected the new president of Venezuela. He had won the majority of the votes of all of Venezuela's states except the state of Amazonas, which held the country's largest indigenous constituency. Wanting to understand why he'd lost there, Chávez sent a team to Amazonas to find answers. The team that arrived in Toki included various government officials, some representatives from the Catholic church (the dominant religion in Venezuela), some reporters, some armed members of the Guardia Nacional, and a man who seemed to be in charge. They wanted to know what we were doing there and demanded to see our permits. They had us unpack all of our *cajas* and searched our belongings for any data that we had collected. We had not yet collected any data. They examined our passports carefully and wanted to take them to some other location for more inspection. We would not let them leave with our passports. They decided that we would have to leave Toki and told us to repack our searched *cajas* and board the military boat on which they had arrived. I was scared but also angry, perhaps amplified by the mefloquine. Because the river was low (it was the dry season) and the river was rocky, our weight was again a concern. They wanted to split up our team and take us out separately. We refused. So, we all loaded into the boat, along with our *cajas*, and were forced to take the risk of running into rocks.

By the time we all loaded the boat with our *cajas*, it was dark out. We were travelling down the Orinoco by moonlight. All of the soldiers were with us – mostly young men who were friendly, laughing, and also armed. It was a long journey and the boat was moving faster than it should have been given the weight, rocks, and shallowness of the river. My partner told me that the boat might capsize, and that if it did, I had to forget all the cargo and swim to a rock or the banks. What?!?! Now my life was in danger here? And what about the piranha? We had purchased emergency evacuation insurance, was this a valid time to use it? Who did I think I was trying to be an anthropologist?

Sure enough, we hit some rocks at high speed. The boat was in the air for what felt like several seconds, then it slammed down hard on the rocks. We were now stuck, but had not capsized. We waited while the soldiers figured out what to do. It was beautiful, moonlit night there on the Orinoco. The soldiers were working hard to get the boat unstuck, standing chest-deep on underwater boulders, using ropes tied around their waists and shoulders to jostle the boat. I worried about them and the piranha. There were probably crocodiles in there too. But they had their guns, right? Never in my life did I imagine experiencing these conditions. After several hours, the soldiers successfully manoeuvred the boat off the rocks. We continued down the river and were eventually unloaded, with our *cajas*, after dawn on the shore of the town of La Esmeralda. We were obviously hungry and tired, and we did not know what the next step was. I was thankful that the soldiers were so pleasant. A lot of them were just young men doing their jobs. We'd had

1 conversations with them. They wanted to know if various ridiculous claims about
 2 the US were true. We'd laughed with them. We had also figured out that the person
 3 who seemed to be in charge was, unsettlingly, a former student of Chagnon's who
 4 had had a falling out with him years ago.

5 We were stuck in La Esmeralda for a week, waiting for a plane to come in that
 6 we could catch to leave. The Guardia Nacional placed us in a Swiss-built biological
 7 research station that was not in use for the season. It was odd to see a Swiss
 8 chalet-style building with its tall, sloping roof in the middle of a tropical rainforest
 9 that would never see snow. Our belongings were searched countless times: we had
 10 to unpack our *cajas*, lay everything out on the ground to the satisfaction of anyone
 11 from Chávez's team, then repack the items. They were looking for data, but we
 12 had already demonstrated in Toki that we had not collected any. The former
 13 student of Chagnon's from Chávez's team had made waves over who should be
 14 allowed to conduct research on indigenous Amazonians – anthropologists from
 15 foreign countries? officials from the Venezuelan government? Catholic missionar-
 16 ies? Protestant missionaries? no one? – and over what kind of research should be
 17 allowed. Our being searched repetitively seemed intended to demonstrate that
 18 Chagnon's affiliates were *not* supposed to do research there. *We got it*. At this
 19 point, we just wanted to get home.

20 While waiting in La Esmeralda, we met several Yanomamö individuals, includ-
 21 ing Cesar Deminawa, an infamous figure from Chagnon's ethnography. Decades
 22 prior to our visit, Deminawa had acquired several shotguns from Christian mis-
 23 sionaries that the missionaries intended to be used for hunting. Instead, Deminawa
 24 used them to murder several Yanomamö enemies, in the process gaining substan-
 25 tial social status as an *unokai*. So here was this murderer whose hand I had just
 26 shaken, wearing Western-style clothing.

27 Eventually two small planes came into La Esmeralda, specifically for us, sent by
 28 Jaime Turón. We loaded up our *cajas* and headed back to Puerto Ayacucho. This
 29 flight felt much longer than the flight to Toki. Our pilot read a comic-book version of
 30 bible stories as we flew over the dense Amazonian forest. At the airport, we again saw
 31 the velvet paintings of the Yanomamö girls. At this point I looked pretty good myself
 32 – now smoking cigarettes, I was tanned, slimmer, and fiercer than I was a few weeks
 33 prior. We hopped from Puerto Ayacucho to Valencia in Venezuela, then to Aruba,
 34 and finally to Los Angeles, arranging flights one airport at a time. While hopping
 35 airports near the border of Colombia on our unplanned, early exit from Venezuela, it
 36 wasn't our electrical kit that needed so much scrutiny, nor were officials looking for
 37 data. Now our belongings were being searched for drugs, and the focus was on our
 38 100-plus plastic, airtight film canisters. Unpacking, opening, closing, and repacking
 39 these potentially cocaine-containing canisters nearly caused us to miss connecting
 40 flights at least twice. There was no wi-fi with access to Travelocity to help us arrange
 41 our exit more efficiently – we just tried to head generally north and west from one
 42 airport to the next. It was not inexpensive. We arrived at LAX on Christmas night. My
 43 grandpa, who picked me up at the airport, remarked at how our team of four so
 44 adroitly manoeuvred our heavy *cajas* into formation for loading.

Back in Santa Barbara, we learned that the medicines from Direct Relief International had ultimately arrived by plane in Toki at about the time the soldiers arrived. The villagers hid the supplies at first, and once the commotion of the election died down, Jaime Turón saw that they were given to a local clinic, as planned. The trip was not a total loss, but it was clear that, with regard to my doctoral research, another field site would have to be pursued. Shortly after returning to Santa Barbara, I did briefly pursue another site in roughly the same area of the world, to take place that spring. But, I was warned early on by a trusted senior colleague that my safety as a female person might be at risk there. I backed out of the trip before buying a plane ticket, using some excuse about lack of funding or my health. I didn't want to tell the faculty I would have been accompanying about my real concern.

I switched from South America to East Africa for my third attempt at a field site. A colleague from my undergraduate days at UCLA had conducted years of fieldwork with the Hadza in Tanzania, and there was the possibility that I could join one of his upcoming trips. The Hadza are hunter-gatherers living on the African savannah, an ideal field site for an evolutionary anthropologist. I started Swahili classes at UCLA. I had family in LA, my hometown, and could easily drive between UCLA and UCSB for weekly classes. The Hadza did not speak Swahili, but those with whom I would work in getting to the Hadza did. I could learn Hadza once I was in the field, and the person I would be joining assured me that Hadza was easier to learn than French or Spanish.

A venture to East Africa was more expensive than South America, and I couldn't fund another field visit myself. I applied for an NSF (National Science Foundation) grant, knowing there was a low probability of getting it. My theoretical perspective and research plan were not sufficiently developed to count as excellent science worthy of NSF funding, and, at the time, applying evolutionary theory to human behaviour was a controversial matter anyway. I also applied for a grant from a local chapter of Rotary International, an organization of business-people that conducts charitable work around the world. Rotary International was keen on supporting projects in Africa, and a colleague in the Anthropology Department at UCSB had recently been awarded a Rotary scholarship to conduct research in India. So, I put in the effort to apply. Applying involved more than just a written statement of intended research. Rotary was primarily interested in the humanitarian aspect of its scholars, and the promotion of international understanding needed to be woven into my research plan. I also needed to attend several weekly lunch meetings of the local Rotary Club, learning about their principles and getting to know some local representatives. There would be a few rounds of interviews, and I needed to portray myself as an ambassador.

I don't recall exactly when or why I made any cuts to continue on in the scholarship contest, but I knew that I was among three final candidates when I was told the final interview would take place in Solvang, a schmaltzy Danish-style town about an hour's drive north of Santa Barbara. If I won, Rotary would pay for my travel and research, and also connect me with Rotary International representatives

1 in Tanzania, which might be helpful in getting permits and establishing longer-
 2 term access to the field site. My association with Rotary would also mean I was not
 3 just a student from an American university showing up to collect data, but a Rotary
 4 Ambassador there at the invitation of local businesspeople, with the intent of fos-
 5 tering international understanding.

6 The person who won the scholarship was a tall, blond, good-looking man,
 7 younger than me, who spoke of his planned ambassadorship with adept self-
 8 assuredness. He was an undergraduate at a community college, and he had long-
 9 standing ties with a local Rotary chapter. I came in second place, and also did not
 10 get the NSF grant. Lacking sufficient funds to travel with my UCLA colleague on
 11 his next trip to work with the Hadza, I abandoned the attempt to get to Africa.

12 To review, my first field attempt failed due to politics, my second due to safety,
 13 and my third due to funding. I still needed to get to the field and get my boots
 14 muddy like a good evolutionary anthropologist. For my fourth attempt at estab-
 15 lishing a field site, I looked to a yet another far-off part of the world, the Pacific. A
 16 new faculty member had joined our department and had a long-established field
 17 site in Melanesia. The indigenous people of the region subsist by foraging for
 18 seafoods and growing starchy food crops on a small scale. At this point in the
 19 theoretical development of my research, I was exploring the role of gossip in
 20 female relationships and was studying SNA methods for quantifying this phenom-
 21 enon. The professor was interested in using SNA methods in his research, and we
 22 talked about collaborating. After several meetings, he told me about an internal
 23 university grant for faculty, for which we could apply to fund my visit to his site.
 24 I wrote the proposal to collect basic social network data on the members of several
 25 small villages with whom he had worked for years. This would be preliminary
 26 work to map out social relationships, and it could be used to contribute to later
 27 studies involving networks and gossip (my interest), and network and resource
 28 transmission (his research interest). I wrote the grant proposal, he edited and sub-
 29 mitted it in his name, and he was awarded the grant. The funds were used to buy
 30 me a (very expensive) plane ticket to the site. The funds would also pay a local
 31 family the professor knew for me to stay in their house and receive meals. The
 32 people with whom I would be working spoke a pidgin of English, and I was able
 33 to access a dictionary of the pidgin, which I began to study. Pidgins have smaller
 34 vocabularies and simpler grammatical structures than long-established languages,
 35 so it would be easier to learn how to communicate directly with indigenous people
 36 of this site than with the Yanomamö, Ye'kwana, or Hadza.

37 This all happened very quickly, and once we made the major plane ticket pur-
 38 chase, I started to step back and look at what I was doing: I was a young, unmar-
 39 ried woman about to take a long trip to the middle of nowhere, where I had no
 40 established social ties, with a man who was new to the department and about
 41 whom I had limited background information. This was over a decade before the
 42 2014 revelation of shockingly high levels of sexual assault and harassment in the
 43 field by senior male mentors towards junior female students among physical
 44 anthropologists. I decided to avoid such potential problems by taking my partner

with me to the field, he and I paying out of pocket for his plane ticket and expenses. Before purchasing his ticket, my partner wanted to meet with the professor to talk about the trip. I was expecting the two to become fast friends and find research interests in common. Instead, the professor became angry, essentially forbidding my partner from collecting data and asking any questions of the field informants, and threatening retaliation if he did. It was as if the professor thought my partner were a spy intending to steal data from “his” field site. My partner assured him that he was only going to assist me with my data collection and had no intentions of collecting his own data or establishing his own field site in the area. Anthropologists certainly don’t “own” their field sites, but my partner really did not have any interest in doing his own research there, and this professor had no right to forbid him from doing research if he wanted to.² My partner was disgusted at the negativity that had been directed at him, but would go if I wanted him to. I did, so I went to talk to the professor myself that day. The faculty person was clearly agitated and said “I don’t give a fuck about your boyfriend.” I bowed out of the trip right there, telling him that I felt his attitude was an indicator of potential conflict in the field. I viewed him as too excitable, proprietary, and concerned with being in charge. In Venezuela, even with team members who were friendly, cooperative, and equal, unexpected circumstances caused substantial difficulties. What if unexpected challenges and conflict came up while at these remote islands in the Pacific, where flights were rare, and I had only this person to rely on?

After this meeting, the professor sent me an angry email, in which he threatened to tell the chair of the Anthropology Department, my PhD committee members, and the Graduate Division that I had abandoned the project and wasted his grant money. I beat him to it and immediately forwarded that email to my advisers, then went to talk to them. As the actual author of the grant proposal, I viewed the effort and money as mine to lose, though the grant was technically in his name. I told my advisers I did not want to be alone in the middle of nowhere with that person. My advisers agreed with my decision, and, fortunately, I faced no penalties other than wasted preparation for yet another failed field attempt. Years later, I learned about some very problematic encounters this professor had had at the university, and that he was ultimately fired. Bullet. Dodged.

In the summer of 2001, my partner accepted a short postdoctoral fellowship at a research institute in Berlin, Germany. With no immediate obligations in Santa Barbara, I accompanied him. While there, I gave talks on my experiments on gossip, and was fortunate to be awarded a stipend to continue working on this research in Berlin for the duration of the summer. (Ah, what if Berlin could become my field site?) Over drinks at hip Berlin cafes along the Spree River on warm summer evenings, I had conversations with students from various European countries who were also studying at the institute. We exchanged ideas and facts about college experiences in the US versus Europe. These conversations were an interesting anthropological exercise in that I came to view the US college experience from that of an outsider. One feature of US colleges that my European colleagues viewed as quite strange was the presence of college Greek communities.

1 When I returned to Santa Barbara to work as a TA in the fall of 2001, I told my
2 PhD chair about my new idea for a field site: I wanted to study female cooperation
3 and conflict in college sororities at a location I could access on my own, someplace
4 in southern California. After several failed attempts to get to a small-scale, kin-
5 based society that practised hunting and gathering or horticulture, I was taking
6 things into my own hands, looking to a local subculture where female friendship
7 was essentially formalized. I went from small-scale indigenous societies and the
8 possible presence of female friendship abroad to an industrialized, state-level
9 society with a guarantee of female friendship in my backyard. Conducting research
10 with sorority informants would be facilitated by the fact that I grew up in southern
11 California culture, and spoke their language. Fluent in the vocabulary, grammar,
12 slang, and subtleties of California English, there was no question that every word
13 I would hear and overhear while embedded in the Greek community would be
14 understood. Studying gossip content was now a possibility.

15 My adviser put me in touch with a former student of his who was now a high-
16 ranking administrator at Southern California University (SCU). I met with her to see
17 if the idea seemed feasible. She felt it was and put me in touch with SCU's Director
18 of Greek Affairs. I planned to conduct in-depth interviews with informants about
19 their experiences of conflict and cooperation in the Greek community, and also
20 collect quantitative survey and social network data. Alongside this venture to a new
21 field site, I would continue to run psychological experiments among Greek and non-
22 Greek university undergraduates. Anthropological fieldwork, I had learned, was
23 risky and costly, and I needed something quantitative and concrete to show for my
24 efforts. Finally, I would participate in the Greek community as much as possible,
25 gaining insight into its structure and the daily life practices of sorority women.

26 SCU's Director of Greek Affairs confirmed what I had distilled from the aca-
27ademic literature on college Greek communities: because sociologists, psycholo-
28gists, and other social scientists had sought and revealed the negative aspects of
29Greek life (e.g. hazing, binge drinking, eating disorders, elitism, plagiarism,
30homophobia, racism), Greeks were reluctant to participate in social science
31research. The Director of Greek Affairs told me that I would need to earn the trust
32of the SCU Greek community if I wanted to get in and do research. He told me that
33the process of recruiting new sorority members – Rush – was about to begin.³ And,
34fortunately for me, Greek Affairs needed a volunteer not affiliated with any spe-
35cific sorority to help run the computer program that matched potential new
36members to specific sororities.⁴ Because I was not in a sorority myself as an under-
37graduate, I had no loyalties to one particular sorority or another, so was unlikely to
38unfairly prioritize certain houses in their pursuit of the highest quality rushees.
39You read that correctly: because there were fairly obvious status rankings among
40sorority houses, as well as perceived variation in the desirability of new members,
41there were numerous formal rules in place to prevent houses from having unfair
42advantages or disadvantages in Rush. Ultimately, my observations of Rush
43revealed considerable competition and cooperation among sororities, among those
44trying to join sororities, and even among individuals within houses.

The Director of Greek Affairs put me in touch with the governing body of the Campus Panhellenic Association (CPA), a group of elected and appointed representatives from different sororities responsible for running the coordinated recruitment process for the campus's eleven National Panhellenic Conference (NPC) sororities. Founded in 1902, the NPC is a confederation of twenty-six sororities in the US and Canada that governs, administrates, and supports its members.⁵ During Rush, the CPA organizes and monitors the recruitment activities of specific sororities at a local level; this includes a responsibility to punish sororities if they violate formal rules surrounding recruitment. Aside from providing a safe environment for sorority members and potential new members (e.g. zero tolerance for "hazing" practices), one of the most central concerns during Rush is that all sororities are treated equally – that one sorority does not have an unfair advantage in recruiting the most desirable new members. Sororities vary in wealth, academic standing, athletic ability, congeniality, conviviality, physical attractiveness, having social ties to particular fraternities, and other reputational dimensions. It was so important that no sorority use their reputational advantages to unfairly recruit new members that an official book existed detailing the rules of Rush, as well as the punishments for rule violations. The NPC updated this book of formal rules yearly.

As a Rush volunteer, I was allowed to accompany potential new sorority members, or *rushees*, as they visited different sororities. Rushee groups are led to house visits by women from different NPC sororities called Rho Chis (rhymes with bowties), or Rush Counsellors. Rho Chis are sorority members who have temporarily disaffiliated with their sorority and undergone training to serve as advisers to rushees. In fall 2000, SCU had about 350 rushees, and each needed to visit all eleven NPC houses at least once. These rushees were divided into thirty groups, each assigned one of thirty CPA-trained Rho Chis. Rho Chi groups would walk together through the residential area around SCU and visit each house for *parties*, where rushees met and mingled with sorority members, watched skits and dances, and assembled small crafts for philanthropic causes; during parties, rushees might also be served light refreshments. Rushees want to make good impressions at parties, displaying their social status and skills, and maximizing their presentation with the right clothing, makeup, hairstyle, facial expressions, gestures, and posture. These daily high-intensity visits to up to eleven houses include a great deal of walking between houses, often in attractive but uncomfortable shoes, in the late September midday sun.⁶ Almost all of the women I later interviewed reported that their Rush days were physically and emotionally exhausting. Rho Chi leaders must encourage rushees to stay with the Rush process despite this strain, partly because of the responsibility Rho Chis have to the NPC of ensuring that each sorority has equal access to all rushees.

With regard to house versus house competition during Rush, all the members of one house competed with all the members of other houses to attract the most desirable new members from every fall's pool of rushees to their own house.⁷ Numerous lines of evidence support this conclusion. For example, the sororities with the best reputations routinely reach "quota" during Rush, that is, they recruit

1 the maximum number of new members that their house can hold (up to about 100),
2 where all seniors who graduated the previous spring are replaced by freshmen in
3 fall. When a house fails to make quota, members are disappointed, and a house
4 experiences a reputational drop. How short a house is of reaching quota is propor-
5 tional to a house's reputational drop. In extreme cases, a sorority may cease to
6 exist on a campus if it cannot replenish the number of members needed to effect-
7 ively run a house, as well as their membership dues. The top houses never fell
8 short of quota, whereas the bottom houses regularly fell short to the extent that
9 financial operations of the house were in peril. At the beginning of my research,
10 one house had "folded" due to insufficient membership.

11 The rulebook exists because the tens of thousands of Rush events over the last
12 100 years had indeed generated real conflicts of interest among houses. The rule-
13 book is used by the CPA to monitor and punish sororities who broke the rules of
14 Rush. As one example, the rulebook stated that sorority women were not allowed
15 to wear matching outfits or accessories during Rush. When I asked women why,
16 some indicated that being rushed by seventy-five people in matching outfits was
17 intimidating to rushees. Other informants said instead that if everyone wore the
18 same thing, it would indicate to rushees that all house members could afford the
19 same item of clothing or jewellery, indicating the level of wealth of a house. One
20 year, the members of one house reported a neighbouring house to the CPA because
21 they had observed and photographed all the members of that house wearing match-
22 ing, expensive boots during Rush. The offending house had to pay a fine for this
23 infraction and attempted to retaliate by reporting the first house to the CPA because
24 all of its members wore black skirts and jewel-toned tops for the second-to-last
25 night of Rush. It was unclear if this behaviour violated the spirit of the rules, so the
26 CPA dismissed the case. As another example, one house's members were known
27 to regularly wear expensive, semi-matching Tiffany brand silver charm bracelets
28 during Rush.

29 Another line of evidence for competition among houses during Rush is the
30 requirement that Rho Chis be disaffiliated from their sororities. The disaffiliation
31 is instantiated by a Greek-wide ceremony the week before Rush, where all thirty
32 Rho Chis get on stage, perform skits and songs, and take a pledge of impartiality
33 for the duration of Rush. I attended a disaffiliation ceremony in the fall of 2000.
34 The audience was full of men and women from the Greek community who cheered
35 very loudly as the ceremony unfolded. During Rush, Rho Chis must not reveal
36 their membership to rushees under any circumstances, so they may not talk about
37 their sorority or wear clothing or jewellery showing their membership. Further,
38 every sorority has a framed "composite" photo of its current members displayed in
39 the house, and the faces of any Rho Chis from that house must be physically
40 covered during Rush parties.

41 I also observed substantial within-house cooperation: members were working
42 together to attract the best rushees to their sorority. Within a house, some members
43 could dance, do gymnastics, or sing beautifully. Other members were humorous,
44 warmly engaging, and had excellent conversational skills. Houses cooperated

internally in organizing to maximally display these talents. During a party, a rushee interacts with recruiting, active members of a house, sometimes called *rushers*. When Rho Chi groups enter a house, each rushee will be greeted by a rusher and escorted from the house's entry to another room where they will get acquainted (perhaps to the house's dining room or library). Here, the rushee might be seated at a carefully decorated table, sometimes set with fresh flowers. The rushee and rusher will strike up a conversation. During the conversation, another rusher will approach, introduce herself, join in, and "bump" the previous rusher.⁸ Elegant refreshments may be served to rusher/rushee pairs by another house member, such as petit fours and cucumber water. A show might begin on a stage set up by other members. Dancing, singing, and skits may be performed, accompanied by props and recorded music.⁹ Near the end of the performance, rushees might be invited to join in onstage. Sorority members may have different but coordinated roles in "putting on" Rush, but one activity where all members worked together was "bursting". Bursting is the very loud and enthusiastic singing of a house's traditional "bursting song" while clapping to it rapidly in unison. Being bursted at by large numbers of well-rehearsed young women is an almost overwhelming experience, and the term "rush" originates from the feeling that one is being rushed by a powerful force in witnessing a bursting song.

Though they may not be fully aware of it at first, individual rushees are engaged in incontrovertible competition for limited "bids" (formal membership invitations) from the most desired sororities. Rushees tried to make themselves as appealing as possible to houses, insofar as this could be achieved during limited and structured visits to different houses over the week of Rush. It is not surprising that quickly evaluated features like hairstyle and wealth (as determined by, for example, a specific brand of expensive bracelet) were so central to one's self-presentation. On the first day of Rush, each rushee visits every house, and as the week goes on, rushees visit fewer and fewer houses as determined by a mutual selection process. If a rushee is invited to all houses on day two, she must narrow down the houses she will visit. If a rushee is only invited back to one house on day two, she visits only that house, because the other houses have given her a low ranking, effectively not inviting her back. Here is what one freshman said about her positive Rush experience:

I loved going to the different houses. It was tiring. Rush is so tiring, just talking with all the people and so many times the same things, the same conversations, especially like the first day when you're breaking ice and you're just starting to, to go in and it's like "What's your major? Where are you from? Where do you live?" Eh, you know. So but, like I would really get excited when we were going to Kappa Lam you know. And it was really, I love stuff like this. We'd all meet with our Rho Chi groups and your Rho Chi would give you your thing that said where you've been invited back to ... And I kept getting asked back to every house so it was good it was like ... encouraging the whole way. And I finally narrowed it down to Delta Nu and Kappa Lam.

Here is how the mutual selection process works. When a day's parties are over, each rushee ranks the sororities she visited on a scantron that she submits to her Rho Chi, who then gives her rushee group's stack of scantrons to Greek Affairs. Rushees sometimes feel overwhelmed in making their rankings; they are choosing what group of women will become their closest friends for the next four years. I often saw rushees crying over their difficult decisions. Some rushees would "suicide" a house, meaning they would only rank it highest, leaving other houses with no scores; this effectively prevented them from getting invited back to any house the next day unless their top house invited them back. Back in each sorority, more ranking is going on, this time with each rushee getting scored by the women who rushed her. In one house, for example, multiple rushers use a five-point scale to indicate how much they want a rushee to become a member of their house. Averages of these scores are used to rank all the rushees from that day's parties. This ranked list gets submitted to the Greek Affairs office by midnight, where a computer program reconciles each sorority's rankings with each rushee's rankings (this is the program I had volunteered to run, bias-free). If a house goes past midnight in generating its ranked list, the rulebook states it must pay a steep fine that increases by each overdue minute, because, for things to be fair, all sororities must have the same amount of time to make their rankings.

Here is another woman's more negative account of Rush and the assessment of rushees:

I hated Rush more than anything, both going through it and putting others through it. When I went through, it was the most exhausting week of my life, everyday you go to tons of different "tea parties" and have to talk to a million girls about stupid shit and try to impress them. I came home every night and cried. I swear it's a method of brainwashing, because they break you down over the week and leave you so vulnerable, and then on bid night they sing to you and try to woo you into their house and tell you that you were meant to be a part of them, that you've found your "sisters". Such bullshit.

Then once you're in, you find out what Rush is really like. The girls that don't have a chance are kicked to the corners during the tea parties, while the girls you want are introduced to as many different people as possible during the twenty minutes that they're at your house. Then at night they read off every girl's name, and people just rail on them: she's fat, she's stupid, she's from my hometown and a total dork. Or, they'll say shit like "she's really rich and has a ski cabin, she's obviously PiTheta material, she's a legac.." Blah blah blah. For hours! It was pure hell, I ended up feeling like the biggest bitch in the world, surrounded by the biggest bitches in the world. It's a sick situation for sure. You can quote me on that one!

I also wanted to understand friendship, conflict, and cooperation at the interpersonal day-to-day level, outside the formal activity of Rush. Throughout 2002 and 2003, I interviewed over 50 per cent of the members of the largest sorority at SCU,

Delta Nu (an NPC sorority that had 104 members when I began my research). Over 90 per cent of the sorority also filled out surveys with qualitative and quantitative components, such as a relational aggression instrument regularly used by psychologists. I phoned and asked everyone that I could reach for an interview. I paid twenty dollars an hour for 180 hours of interviews of about sixty women, where all informants gave me permission to tape record their interviews.

My semi-structured interview included key questions about informants' within-house friendships, and what conflicts they had experienced within the house. I think my informants disclosed this sensitive information, in part, because they wanted to vent to a listener who knew their peers, yet was required by SCU's IRB to keep member identities, interview content, and the sorority's identity confidential. Conflicts usually involved genuine conflicts of interests, and I often heard different "takes" on the same events from different members. I realized that conflicts were sometimes due to misinformation or the withholding of vital information (due to, for example, sworn secrecy) that could have otherwise resolved the conflict. But, I could not disclose the content of one person's interview to others.

Informants talked extensively about close, within-sorority friendships best described as *cliques*. Members of these small groups almost always joined the house during the same semester and were about the same age and year in college. Members of cliques would strongly support one another when one member had a conflict with a house member outside the clique. Members of these close, within-house friendships were keen to maintain one another's reputations when they were maligned by another house member, for example, by pointing out an alternative interpretation of a behaviour or event, providing defence or an alibi against a negative accusation, correcting the dissemination of inaccurate information, and even confronting an accuser on behalf of a close friend. Evolutionary theories of human female cooperation suggesting benign functions for relationships among women and girls would predict that women were providing their close friends with a shoulder to cry on or telling them things were okay and that they were loved. In Delta Nu, I saw women putting their heads together and figuring out how to undo the reputational harm that had come to their close friends, and even bringing harm to the reputation of the friend's accuser or rival. The support was strategic, confrontational, detective-like, and coordinated, where women worked together – coalitionally – to impact the reputations of those involved in the conflict. This research helped me develop Informational Warfare Theory, which posits that one function of close friendships is the coordinated collection, analysis, and dissemination of reputation-relevant information, with the aim of increasing the reputations of oneself and one's allies relative to the reputations of competitors in the community.

To conclude, I spent half of my time as a graduate student just trying to get to the field. These efforts involved substantial work, money, and vulnerability. When I was depending on the networks, politics, funding, and, for lack of a better word, *personalities* of others to get to the field, I failed, and it was clear that being female was costly. When I turned to depending on my own local network ties and paid more

attention to my research topic than to the ecological ideals of my peers, I found a rich ethnographic experience, and was able to collect both quantitative and qualitative data. I learned more about Greek culture and the female relationships in it than I ever would have learned working with women and girls via an interpreter in the Amazon, the Pacific, or East Africa. There may be unfair disadvantages surrounding getting to the field, collecting data, and working with untrustworthy colleagues, but perhaps these costs can be offset by making the most of one's specific set of situational and interpersonal skills in conducting research. There is value in discovering unconventional field sites for anthropological work.

Questions for reflection

- 1 If you were starting out as a grad student, what would influence your choice of a field site, and why? Would it be your personal interest in a particular culture or region, your theoretical or methodological interests, your language skills, a trusted adviser's ties to a particular site, or funding opportunities?
- 2 Are the benefits to cultural or scientific knowledge that might come from your informants' willingness to share information justified by any potential risks of their confidentiality being breached? What measures would you take to protect the confidentiality of your informants?
- 3 How heavily should risks to a person's short- and long-term physical and mental health, safety, financial state, and comfort factor into their academic research endeavours?
- 4 What are several pros and cons of doing research on people from one's own culture?

Notes

- 1 Females do sometimes aggress as individuals, and they occasionally cooperate in aggression when it is defensive, but they generally do not engage in offensive coalitional aggression (attacks).
- 2 The university can prevent research from being conducted. Research that involves humans cannot be undertaken without approval from a university's IRB, and my partner didn't put in a proposal to them because he did not intend to do research. The professor had no reason to be concerned.
- 3 The term Rush has been replaced with "Formal Recruitment" at most universities, but I will use Rush, as that is the term my informants most often used when talking about the process.
- 4 Men's fraternities use a different recruitment system.
- 5 SCU's Greek Affairs office worked with non-NPC sororities as well, which include historically ethnic, minority, and multicultural sororities and fraternities, but these are not overseen by the CPA.
- 6 Many Rho Chi leaders carried emergency flip-flop sandals with them to loan to rushees whose feet hurt from walking all day in painful shoes.
- 7 Outside Rush, it is inarguable that sororities continuously compete with each other for good reputations. At SCU, a handful of the eleven NPC houses made up the "top four" tier and were preferred by high-ranked fraternities as partner-hosts for Thursday night parties during the first few weeks of the semester.

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- 8 Later, interviews with informants from one house told me that “bumping” is fascin- 1
 2 atingly orchestrated, revealing competition *within* the house for placement in high-ranked
 3 bump groups.
 9 The rulebook explicitly prohibited smoke machines and coloured and strobe lights 4
 5 during parties; white lights were okay. 6

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