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CERT	IFICATE OF APPROVAL
	MASTER'S THESIS

This is to certify that the Master's thesis of

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COUNTER CULTURE:

THE SHOCKINGLY TRUE STORY OF HOW ONE WOMAN PLUNGED INTO THE MIDDLE-CLASS, WELL-EDUCATED WORLD OF HIGH-STAKES CARD COUNTING, AND THEN MADE A DOCUMENTARY VIDEO ABOUT IT

by Lyn Elizabeth Elliot

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Thesis Supervisor: Associate Professor Leighton Pierce

I was fourteen when my parents told me that they had taken up card counting as a hobby. They had been involved for some months now, they said, but they had wanted to be sure that it was something they were really going to be doing before they told me.

Now this was news. I was aware that about three months earlier my parents had started going out together every Thursday evening, and come to think of it, they always had been vague about what they actually were doing during that time. I suppose I had assumed that they were going out to eat, or seeing a movie, or visiting friends. But no; as it turned out, every Thursday evening they were attending meetings of the MIT Blackjack Team.

As my parents explained what card counting was and assured me that this was not an irrational scheme that was going to bankrupt the family, in my mind I tried to square what I knew about gambling with what I knew about my parents. My father was an astronomy professor, and my mother was a Latin teacher. They liked reading, gardening, canoeing, and hiking. They certainly never gambled. From what I had gathered from movies and books, people who gambled in casinos were either semi-desperate semi-criminal sorts or high-living fast-lane folks, lured by the thrill of risk and the chance of easy money. And though these two were socially different types, the petty criminal and the decadent rich person were fundamentally similar in my fourteen-year-old mind in that neither was smart. It wasn't smart to wager your money when the odds were against you, and in casinos, I understood, the odds were always against you. Smart people just didn't go to casinos, and if my parents were anything, they were both very smart. I had even heard my father joke that lotteries were a

tax on people who didn't understand odds, and here he and my mother were, a pair of Ph.D.'s, telling me that they had a system for winning at casino blackjack, and that they intended to "invest" some of their savings in it.

My parents understood that what they were telling me was strange news, and they patiently answered all of my halting and confused questions. My father explained that mathematically it was possible for the player to win at blackjack, and that the theory and method had been in publication since the early 1960's. The edge that a player could gain by utilizing this method, however, was quite small, so to make it worthwhile it was necessary to bet large amounts of money. That was where card counting with a team came in—my parents had joined a group of people who pooled their money, played blackjack in Las Vegas and Atlantic City on this common bankroll, and shared the proceeds. One of my father's students, Sarah M., was a member of this team, informally known as the MIT team because all of its members were either connected with MIT themselves or connected with someone who was, and it was Sarah who had suggested to him the possibility of joining the team.

The more I learned, the more fascinated I became. Team members often bet thousands of dollars a hand, and thus walked around casinos carrying enough cash to buy a house. Card counting was legal, but since casinos could and would throw you out if they discovered you doing it, it was necessary to use subterfuge. Team members communicated with each other in the casino using signals. Players employed acts to make the casinos think that they were high-rolling gamblers instead of bankrolled card-counters. Once the casinos believed that you were a real high roller and that your big bets would inevitably translate into big losses, there was a whole system of casino "complimentaries" that team

members could take advantage of: lavish hotel suites, expensive restaurant meals, bottles of Dom Perignon ordered up from room service and transported home intact. It all sounded utterly unbelievable to me, first in that it was actually possible to legally beat a casino, and second that this thrilling double-life was inhabitable by upright, bookish, and unglamorous people like my parents.

After letting me in on their secret, my parents continued to attend the weekly team meetings, and to go away on weekend trips to Atlantic City about once a month. My father soon tired of it, however, finding the long periods of extended concentration, the pressure of handling large sums of money, and the effort involved in deceiving the casinos too stressful for what he had hoped would be a relaxing weekend diversion. My mother, on the other hand, enjoyed it very much, and continued to play with the team for about two years. For my father, a shy, stoop-shouldered scientist, getting the casinos to believe that he wasn't a card counter had been difficult, but for my mother, a gregarious middleaged woman with a Boston accent, it wasn't. For my part, I continued to be intensely interested in the parts of the process that I saw at home. When my mother was getting ready for a weekend trip, she would borrow diamond and gold jewelry from her family and friends, pack up what she called her "casino clothes" (flashy outfits that she never wore anywhere but the casino), and have me deal cards to her in preparation for the skills test she would have to pass before being allowed to play on team money. When she returned from a trip, there was the loot to survey—expensive bottles of wine and champagne to accompany the pieces of jewelry back to their owners, and of course, lots of cash. ("Close the blinds, girls," my mother once said to me and my sister as we stood in the kitchen, "and help me count this." We closed the blinds, sat down at the

table, and helped my mother to count out \$40,000 in hundred-dollar bills. We understood that it wasn't all hers, that it was a portion of the team bankroll that she had been entrusted with, but it was impressive nonetheless.)

My favorite thing about my mother's return from a blackjack trip, however, was hearing the stories of her teammates' outrageous derring-do. There was the aerospace engineer who donned evening gowns and convinced the casinos that she didn't have a brain in her head while winning money from them hand over fist; the biochemistry major so good at glimpsing cards mishandled by a careless dealer that he would confidently double-down on stiffs (most incredible was the time when he doubled \$5000 on a nineteen with the knowledge that a two was the next card); and the long-haired computer science graduate student who, with the aid of talcum powder dusted onto the front of his shirt, successfully played the part of a coked-up, big-betting rock star. These sorts of stories made me long for my twenty-first birthday, when I would be able to take my own upright, bookish, unglamorous self into a casino, and be a secret agent of statistical smarts.

My mother quit the blackjack team during my senior year of high school. The grueling trips had finally become too much for her to handle in conjunction with her full-time teaching job, and she was also a bit bored with the routine of counting cards. At the time, I was engrossed in my own interests at school, which ran toward the study of literature, Latin, and short-story writing, but nevertheless I was disappointed that my mother had quit the team. It wasn't a big part of my life, but I did really like it that my mother counted cards. Once every month or two Atlantic City would get pounded by a middle-aged Latin

teacher from Massachusetts. I was glad that that happened, and that I was privy to it. Though quit, my mother remained in contact with some of her teammates, and I still got to hear some stories from time to time. My mother also promised me that if in four years I was still interested in playing myself, she would take me to a team meeting.

At college, I continued to pursue my interests in literature and writing, and I developed a new interest in film. I decided to go to graduate school to become a professor so that I could think about, talk about, and write about books and movies all of the time. But I also wanted to be a card counter. My plan was to go directly to graduate school the fall after I graduated from college, but only after having spent the previous summer living at my parents' house in suburban Boston, counting cards with the MIT blackjack team.

I formulated this plan the summer after my junior year, a couple of months before I turned twenty-one. My mother took me to a team meeting at the end of that summer so that I could meet some of the people and learn what would be expected of me as a team member. We drove to the MIT campus, walked along the Infinite Corridor, and entered the classroom where the team met for practice once a week. About twenty people sat around at tables in clusters of three or four, dealing cards to each other on blackjack felts spread in front of them. My mother brought me over to talk to James M., one of the team leaders whom I actually had met several years earlier. James M. was in his early thirties, a classically nerdy-looking guy, kind but with limited social skills. He was also a legendary blackjack strategy wizard; when I had first met him, my mother had pointed him out to me as one of the team "masterminds."

James M. was happy to see my mother, and pleased that I wanted to join the team. (Women of any age were always particularly desirable recruits because they defied the casino's stereotype of card counters as white or Asian men in their twenties.) James gave me an information packet, which explained the skills I needed to learn and the tests I would have to pass in order to play. There were three levels: the first test involved memorizing blackjack basic strategy, and being able to play every possible hand correctly and automatically. The team tested this ability by dealing out five shoes (six decks a shoe) of blackjack hands, and the player was required to play every hand correctly. Make a mistake, and you started over. The next test was a simple counting test. The player had to play through three shoes keeping the count, and playing perfect basic strategy.1 The player was allowed no basic strategy mistakes, and only three counting errors (you were only allowed to be off by one—a greater error than that at any point was an automatic fail). The third and final test was by far the most difficult—in what was called the "ten-shoe," a player had to play through ten shoes, playing perfect basic strategy, keeping the running count, estimating the number of decks left to play, dividing the running count by that number to get the true count, and placing bets in correct proportion to the true count. Players were allowed five counting errors (off by no more than one) and five betting errors (off by no more than one unit) over the entire ten shoes.

I took the packet back to school with me that fall. I memorized basic strategy, and when I returned to the Boston area for my winter break, I attended team meetings and passed the basic strategy test. The following winter at school

¹ For an explanation of card-counting theory and method, see Thorp and Wong.

I practiced counting, and when I went back for spring break, I passed the simple counting test. That spring I practiced converting the running count to the true count, graduated from college, and headed home to face the ten-shoe test.

My mother had explained to me that the ten-shoe was a bit of a hazing ritual. The person dealing dealt very fast. The table was ringed with two or three auditors who monitored the accuracy of the play and kept the error tally by posting marks on the chalkboard. Team members would approach the test table and pretend to be casino personnel, making chatty conversation with the examinee. Other team members would sidle up to the table and act like obnoxious tourists. I remembered my mother telling me about a time when one of her teammates opened the business section of the newspaper during a tenshoe and read off stock quotes: "One...One and a half...three-eighths...Two..." The test was conducted in this way not out of mean-spiritedness, I knew, but because the team would only entrust its bankroll to players who could demonstrate a consistently high level of skill and who could maintain those skills in the face of casino distractions. Although I was never very interested in the theoretical side of card counting, I had learned enough about expected variance and certainty equivalence to understand that a card-counter's edge was razorthin, and that too many mistakes could easily obliterate that edge and result in disastrous losses.

There was always an air of excitement at a team meeting when a ten-shoe was in progress, and mine was no exception. Like most of the people on the team, I had failed my first several attempts, going over the error allotment in the fourth or fifth shoe. But on this particular June evening in that MIT classroom, I was making it through shoe after shoe with errors to spare. It seemed that I had

finally achieved a level of card counting skill where I could effectively manage the multiple tasks and calculations without feeling like I was just barely holding on. As I got further into the test, finishing six and then seven shoes, teammates drifted over to both encourage me and provide the requisite distractions. James M. was dealing to me, and as I finished my eighth shoe, he glanced over his shoulder and called, "John?"

In keeping with the team's custom of increasing the intensity of the test as it progressed, James M. was summoning John C. to deal me my last two shoes. While James M. was the team's strategic mastermind, John C. was the team's best in terms of pure card-counting skill. John C. could calculate bets faster than anyone, he could keep the count at three different blackjack tables at once, and he was dazzlingly adept at all of the advanced play methods the team employed, such as non-random shuffle tracking, 10-cuts, and ace-tracking.² John, a Chinese-American MIT graduate in his early thirties who had been counting cards as his primary occupation for almost ten years, was so well-known and feared throughout the gambling world that he had an extremely difficult time finding casinos that would let him play. The stories that circulated within the team about John's incredible skill were usually followed by stories about the lengths to which John had recently gone in order to be able to play at all: crazy wigs, facial prostheses, and in one famously unsuccessful case that was retold in a feature article in the Washington Post, full drag.³

² See Zender for a description and explanation of these methods of advantage blackjack play.

See Katz.

As John C. slid into the chair and started dealing out cards rapid-fire, I redoubled my efforts at concentration. Keeping the count, calculating bets, using team-approved stall techniques when I needed a little more time to process information, I continued my steady progress toward completion of the ten-shoe. Having John C. deal to me was intimidating, but also a confidence booster: what I would encounter in real casino conditions would be significantly less taxing and strenuous than this test, which of course was the whole point.

I don't remember exactly what happened during those last two shoes, but I do remember catching all of John's attempts to trip me up, and feeling thankful that the cards hadn't presented more opportunities for him to try. I remember getting more and more nervous as the last shoe dwindled down to the last hand, and the excited cheers from my teammates after I had played that last hand, and John and the other auditors confirmed that I had passed the test. I felt exhilarated as I shook hands and hugged people. Everyone there had either passed the ten-shoe or was currently attempting to pass it, so they all knew what an accomplishment and milestone the test was. The feeling I had was similar to what I had experienced at various points in school when I had achieved some sort of academic success. I was still on a high after the meeting was over and I was riding the train back to my parents' house, trying to think of whom I could call to share the news.

What I realized then was the way in which passing the ten-shoe was different from any of my other achievements to date. There was no one I could call, because there was no one outside of the blackjack team and my card-counting parents who could understand what I had accomplished, or care about it in the way that I did. I had made a decision to tell only a few of my friends

about my card counting, and even those friends who knew either didn't really understand what was involved, or thought that my intensity about my new hobby, while mildly amusing, should be discouraged. If I called any of them to tell them I had passed the ten-shoe, they would be politely happy for me, and then move on to another topic.

It was this realization that made me think about the paradoxes of card counting as a kind of subculture. Card counting had its own history, literature, customs, slang, and lore that people learned as they became more deeply involved, and in that way it was obviously a subculture. However, in another sense there was absolutely nothing subcultural about it. Card counting, at least the way that the MIT team practiced it, attracted mainly middle-class, welleducated people who counted cards as a minor detour on the road to a conventional professional career. To a great extent, it was the very values instilled by a high-quality college education—a belief in scientific evidence, creative problem-solving, goal orientation—that enabled people to be successful card counters. On the other hand, no matter how many times one explained to the uninitiated that card counting was essentially just a series of statistical trials that happened to involve real money, because it happened in a casino it was always to some extent linked in people's consciousness with values largely disdained by educated middle-class people-irresponsible risk, dissipation, cultural crassness, and overindulgence. It seemed that card counting drew people who were intrigued by this convergence, and who were interested in dabbling, or at least in appearing to dabble, in an activity unsanctioned by middle-class decorum. That was certainly true for me. Not being able to share my ten-shoe triumph with my friends was actually part of what I liked about

card counting. I liked having a secret dimension to my life, where I did things that seemed to be risky, but that actually weren't very risky at all, both in terms of literal money wagered, and in terms of my life in general. I was fairly certain that counting cards would not jeopardize my larger plan of eventually becoming a professor. If it had been risky in that way, I wouldn't have done it. And this aversion to risk, in turn, is part of what made me a good card-counter.

After I passed my ten-shoe, my play for the team began in earnest. I was added to the roster of people approved for full-stakes casino play, and my teammates began to include me in trip planning. At our weekly meetings we would take time as a group to discuss future trips, seeing whose schedules matched up which weekends, determining who should play with whom from the standpoint of act and strategy, coordinating rides and flights, and figuring out how much money to bring and how best to get it to the play site.

The team's bankroll was 100% cash, spread out among the members in varying amounts. Some people had home safes, and others kept the cash in safety deposit boxes. At the meetings, the team determined how much cash would be necessary to support the play on each trip, and then members arranged to transfer money between them in order to arrive at the prescribed amount. The team certainly had rules about how to handle and account for cash (e.g., report play results and transfers promptly; don't walk alone in Atlantic City or Las Vegas when carrying team money; keep team and personal money separate; don't count team money when traveling in a car with an open window), but the most basic rule, DON'T STEAL TEAM MONEY, went completely unspoken.

The team trusted its members to report wins and losses accurately, and had no mechanism at all to verify members' claims.

What to a conventional business owner might have seemed like a laughably naïve system actually worked quite well. The team's practice of recruiting new players from the social circles of its existing players ensured that an already trusted team member could "vouch for" a new member. In addition, because the process of passing the requisite skills tests usually took several months, this period was a time during which the rest of the team could get to know the new player before he or she was entrusted with the team's bankroll. Finally, it was clear to everyone involved that it would be impossible, or at least very difficult, for the team to operate otherwise. Trusting each other was simply the most efficient way to run the team, and so team members took it upon themselves to recruit only people who merited this trust.

Because blackjack is a game with high variance, meaning that card counters experience dramatic up and down swings on their way to their overall expected win, each weekend group usually required a bankroll of several hundred thousand dollars in order to avoid the possibility of "tapping out" in the course of a trip. Having the physical space to carry that amount of money on one's person took some planning, and the team had already established some preferred methods. A leather jacket could easily accommodate \$200,000, broken down into \$40,000 chunks and spread across outside and inside pockets. One team member devised a money belt, worn under clothes, in which a player could comfortably carry \$100,000. For the women players, purses with the strap secured across one's body were a good option, but it was easy to misjudge the volume capacity of a purse. On my first trip, I discovered that I could only fit

about \$60,000 into my purse without having a wad of hundreds peeking out of the top.

Carrying that amount of cash was thrilling at first, but it became routine very quickly. After my first trip, only occasionally did it occur to me that I was carrying enough cash to buy: a small house, a luxury car, a college education. A player's newness on the team could be gauged by his or her enthusiasm for counting money. For the new players, spending several minutes flipping through stacks of hundreds to verify totals was exciting, but the more experienced players regarded it as a tedious pain in the neck. At one point after I had been on a few trips, I was asked to help count out \$100,000 and load it into a money belt, and I remember feeling vaguely resentful that I had been singled out for this chore.

That first summer, most of the time my trips were to Atlantic City. Three or four other teammates and I would travel down there on a Thursday afternoon or Friday morning, and stay until Sunday or Monday. The designated "Big Player" among us was in charge of getting a complimentary room for all of us to sleep in, and we spent the weekend living off of the "RFB" (Room-Food-Beverage) comp that the casino gave him in return for his big bets. Determining where to play, and how long to play, required consideration of a whole host of variables: which casinos had the most favorable rules and betting limits; which casinos were known for graciously accepting big bets, and which casinos had the least perceptive personnel staffing the tables. Each trip usually had a more experienced member along who was knowledgeable in these areas, and who could help new players learn how to gauge the casino personnel's reaction to their play.

Players needed to be alert to what the team called "heat," which was the term for the negative attention from casino personnel that indicated that they suspected a player of counting cards. Mild heat consisted of a casino employee glaring at you. Medium heat could be a pit boss coming around the table to stand behind you while you played. Higher levels of heat included the casino bringing over the house "card counter-catcher" to your table to count the cards and determine whether your bets correlated with the count, or to pick up the discard and count it down in front of you. In Atlantic City, where casinos are required to deal to all comers, the fatal blow came when the casino changed the game to make it impossible for a card counter to win: "flat-betting" the counter, which meant that the counter wasn't permitted to bet above a certain level, usually \$50 or \$100, or shuffling the deck whenever the counter put out a large bet, thus destroying the counter's advantage. In Las Vegas, where casinos had the right to refuse service to anybody for any reason, the most extreme form of heat happened when a casino barred a player from blackjack play. There were various intensities of barring: a soft barring consisted of a casino manager telling the player politely that he or she was welcome to play any game in the casino except blackjack. In a medium barring, a casino manager would tell a player that he or she could not play any of the casino's games. Harder barrings involved the manager telling the player that he or she was no longer welcome on the premises. If the manager officially read the player the Trespass Act, that meant that if the player returned, he or she could be arrested for trespassing. The most intense barrings of all involved swarms of security guards escorting the counter to a "back room," where, on top of being read the Trespass Act, he or she would

likely be searched, photographed, and questioned. In counter lingo, this form of heat was its own verb, as in: "I was back-roomed at Caesars Palace."

I understood from the other players on the team that getting kicked out of a casino from time to time was unavoidable. Tempting as it might be in that situation to harangue the casino manager for excluding only skilled players, the team's advice for a player being barred was simply to leave the casino as quickly as possible. Leaving quickly gave the casino personnel less time to memorize one's face, and also reduced the likelihood of going to the back room, which was to be avoided if at all possible. The back room was a holdover from Las Vegas mob days, a place where casinos held people against their will and disregarded things like civil rights in their efforts to dissuade card counters from their trade. At the time that I started playing, there were a few stories circulating about card counters from the recent past who had experienced actual violence in the back room. In the early 1980's, James M. had come across a fellow card counter in Las Vegas who had been beaten up by casino employees. There was also a tale about another player who had won a significant sum of money in a Caribbean casino, only to have the casino owner demand its return at gunpoint. The stories were rare, but substantiated. In the back room, it didn't matter that card counting was legal, and that holding a person against his or her will was illegal. Ever protective of their profits, many casinos considered card counters in the same contemptible realm as cheaters and thieves, and thus deserving of the same treatment.

Since I was devoting my summer to blackjack full-time, unlike most of the other players who were counting cards in addition to school or a job, James M.

trained me in other blackjack skills. I learned how to play in a 10-cut group, taking signals while another player controlled the table. I also learned how to track aces through a shuffle, and signal another player when it was time to put out a big bet to catch the ace. I actually enjoyed these methods of advantage play more than card-counting. Ace tracking involved memorizing an ace's position in one shoe, following it through the shuffle, and then estimating where it would come out in the next shoe. There was an observable result when the ace appeared (or didn't) in the position you had predicted. Card counting, however, was the same thing over and over, shoe after shoe, betting when the count was good and leaving the table when the count was bad. It was true that no matter what the style of play, it was always exciting to put out a big bet with the odds in your favor, but as an activity I preferred the discrete memorization and recall of ace tracking. It was more like a game that I might actually play for fun rather than money.

Ace tracking also suited me because it enabled me to assume a low-key team role inside the casino. As a very young woman, there was simply no way that I would ever be able to get away with placing large bets. When I started playing with the MIT blackjack team, the team's bankroll was up around the million-dollar range. A bankroll of this size allowed for a \$2000 betting unit, meaning that team members bet in \$2000 increments. At that time, table limits were generally \$5000 in Atlantic City and Las Vegas, with several of the major Las Vegas casinos offering \$10,000 limits, so team members were among the biggest bettors at every casino at which they played. Big bettors attracted lots of attention and scrutiny, and a big-betting card counter had to have a means of convincing the casinos that he was a high-rolling gambler who played according

to explain why you had so much money to spend got you at least partway there. A young man with a really good story and an act to go with it could succeed as well. But very few young women card-counters, even with good acts, were able to bet at those levels and get away with it. "Real" 21-year-old women gamblers recklessly chunking out thousands of dollars a hand were few and far between, so anyone who fit this description immediately raised suspicion and drew heat. When I tracked aces, however, I didn't have to bet the money. I sat at the blackjack table with a male team member who was comfortable in the "big player" role, and signaled him when and where to place the bets.

When I was actually counting cards, I was also able to play in a low-key role as either a spotter or a controller. A spotter bet the minimum, looking for tables that had high counts, and when she found one, she signaled in the big player. If the big player knew how to count, the spotter would pass the count to him, and then go find another positive-count table. If the big player didn't know how to count, he had to play with controllers, team members who would find positive situations, call in the big player, and then give him a signal for each bet, thus controlling his play. This style of play was called call-ins, and had merits beyond accommodating younger and less charismatic card counters. A large bet spread was one of the things that made card counting so obvious to casinos, and playing call-ins offered a means of camouflaging this spread. One person, the spotter or controller, bet very small, and a different person, the big player, bet very big. The casino saw the big player betting \$2000-\$5000, while the spotter or controller's \$25 bet attracted no attention. Thus, what was in reality a very

aggressive 1 to 400 bet spread looked more like an unremarkable 1 to 2.5 bet spread, barely a spread at all.⁴

Even though I wasn't betting the money, I still had some acting to do while I was in the casino. As a controller, at the very least you had to dress to blend in with the regular casino clientele (which for me meant upgrading my crappy student wardrobe and wearing makeup and contacts) and smile, or at least not stare at the cards too much. Sometimes I would be paired with a big player, and we would pose as a couple. (I didn't mind playing this role, although I thought it was a rather pathetic testament to how few women players the team had, because in terms of act, it didn't make sense: would a high-roller really take as his consort an overweight woman with no sense of fashion and artless makeup? On the other hand, the fact that it actually worked more often than not was in turn a testament to the casinos' greed, which frequently worked in our favor by blinding them to the obvious.) After being in a casino a few times, I learned better how to fit in and act like a gambler. I made up glib answers to the questions "Where are you from?" and "What do you do?" and I mimicked other players' superstitious table patter.

When mid-August rolled around, it was time for me to report to graduate school in Iowa. I had spent about two months counting cards full-time, and somewhat regretted leaving it. Overall I had earned about three thousand dollars, which was about what I could have earned at almost any other summer job that was available to me at that time. However, since I had already done the time-intensive work of learning the skills, it was likely that if I continued to play

⁴ See Uston for an account of his team's use of the call-in game during the 1970s.

with the team, my share of the winnings would increase. For that reason, and also because I still very much enjoyed my double life, I chose to remain on the team's roster, and to try to go on trips whenever my schedule allowed.

My fall schedule didn't permit a trip until the end of October, when my teammate Semyon asked me to go to Las Vegas with him. Semyon, a former computer science graduate student who had dropped out of school to play blackjack full-time, was one of the best players on the team. He had mastered all of the advanced play methods, and had also proven adept at putting over a highroller act. He had been born in Russia, and successfully used his accent as the foundation of several believably outrageous characters. At this point in time, he was playing the role of Nikolai Nogov, shady Russian businessman. Semyon as Nikolai had enjoyed a remarkably long run at Caesars Palace in Las Vegas, where he had carefully staged his act. On his first few trips to Caesars he had exaggerated his accent, and then let it "improve" as theoretically he was spending more time in the U.S. He brought his wife and other women players to pose as his entourage, and he didn't hesitate to make the highest of highrolleresque demands. (His most impressive achievement on this score was getting Caesars to give him the use of a six-seater airplane to take a tour of the Grand Canyon.) Caesars Palace was so convinced that Semyon was the real thing that they let him have a table to himself, which he used to play a varied game of counting, 10-cuts, and ace tracking, steadily winning money that the casino expected eventually to win back, and then some. It was a particularly incredible set-up, by any measure. Because I had never been to Las Vegas, because I had never played with Semyon, and because it promised to be a lucrative trip, I decided to go.

When I met up with Semyon in the Caesars Palace lobby, he had already checked in and begun play. He gave me a key, told me how to get to the room, and we planned for me to find him in the casino after I had dropped off my stuff. The room turned out to be a suite, and although I had seen some impressive suites in Atlantic City, this was something else entirely. There was a huge central room, with art-deco furnishings and sliding glass doors that opened out to the pool. The coffee tables were stocked with fresh flowers, fruit baskets, chocolates, and a split of champagne on ice—courtesy of the casino hospitality staff, who wanted to make Nikolai Nogov and guest feel welcome. The bedroom I claimed was decorated in various shades of rose; there was a big circular bed with curtains around it and a mirror above it, and a pink marble bathtub off to one side. In the bathroom was a huge pink marble hot tub with three faucets, and room for about fifteen people. I made a note to take a swim in it at some point over the weekend. When I found Semyon in the casino and remarked on the lavishness of the suite, he told me that this one was on the small side, and that he hadn't bothered to request a bigger one because only he and I would be staying there. The suite he usually got when he played at Caesars, he said, had two floors and a grand piano in it.

After I sat down at the table to play, it became clear why Caesars treated Semyon the way they did. His bets were huge, ranging all the way up to \$10,000 a hand; sometimes he would wager \$30,000 on a single round. The casino management let him play all seven spots at the table, and accepted his wild betting as characteristic of an eccentric millionaire. The plan was for Semyon to play 10-cuts, and I would track aces and signal him when to bet. I didn't play

any hands myself; I merely sat next to him, holding my purse in my lap and trying not to act nervous.

About an hour went by before I spotted an ace in a trackable position. I tracked it by memorizing the ace and the four cards that preceded it as they were stacked in the discard tray. The dealers at Caesars did a 2-pass shuffle, which meant that during the shuffle they riffled each packet 2 times, which in turn meant that during the next shoe, the four cards leading up to the ace would reappear in order with 2 cards intervening between each one. After the dealer shuffled and started to deal out the next shoe, I gripped my purse tighter. By the time I had seen the first three cards, I was too rattled to even signal correctly. "It's coming," I murmured. Semyon made a big show of telling the dealer that he felt like letting the little lady decide where he should put the big bets this round, and he looked over at me, smiling as if he were indulging a child.

Having an ace dealt to you was very valuable, worth 50% of the bet. For this reason, the team's betting pattern for catching an ace was four betting squares in a row of the maximum bet, "buffered" by small bets on the surrounding betting squares so as to prevent the catastrophe of accidentally steering the ace to the dealer. I showed Semyon on which betting spots I thought he should lay down the big bets, based on how many cards were yet to come out before the ace. I watched as he set out four hands of \$10,000 each. I knew it was the correct play, and I was confident that I had tracked the ace accurately, but part of me was nevertheless amazed that someone would bet \$40,000 on my advice, me being a 22-year-old English graduate student with no particular aptitude for card games other than blackjack, or for math in general.

The dealer started dealing the round, and it was exciting to see the ace of diamonds land on one of the \$10,000 bets, in the spot I had predicted.

Statistically, we had already achieved success on the play, but there remained the matter of playing out the hands to determine whether we would actually win or lose \$40,000. As I remember it, we were in excellent shape; the dealer had a 5 showing, which meant that she was likely to go over 21. All of Semyon's hands were pat against a 5, except for a 9, which according to basic strategy called for a double-down. Semyon dutifully pushed out another stack of \$10,000, and now we had \$50,000 riding on the round. We watched as the dealer played out her hand—she flipped a 10, then drew a 6. Twenty-one. She swept the table, and the \$50,000 went back in the chip rack.

Though we knew that this was not unusual, that all of the team's play eventually leveled out to a win, and that we would get credit for catching the ace, it was still rather stunning to lose \$50,000 all at once. Semyon said, "Well, honey, should we take a break?" I nodded, and we got up from the table. We tried to maintain our nonchalant facades until we reached the lobby, where we openly commiserated about how much it sucked that we had lost that particular round. We didn't look forward to reporting the loss to the rest of the team members who were playing in Las Vegas that weekend also. The last we had heard, the team was down overall for the weekend, and we didn't want to pile on our own bit of especially demoralizing news. Nevertheless, Semyon made the call to the team, and then made another call for dinner reservations at one of Caesars's gourmet restaurants. At least we could console ourselves by running up an exorbitant comped restaurant tab.

On our way into the restaurant, we were abruptly confronted by four security guards. It took a moment for me to understand that it was us they were after, and then my heart sank. I don't remember exactly how they herded us off the casino floor; in retrospect it's easy to wonder why I didn't just refuse to go with them, or make a scene and adamantly insist that I just wanted to leave the casino. All I can say is that the guards surrounded us, and it seemed that our only option was to go where they took us.

We wound through a series of stark back halls, walked down a cement staircase, and entered a sort of office-like space with shabby, bare walls, furnished with metal desks and chairs. Two men in suits and three more security guards were already waiting there. Two of the security guards pushed Semyon up against the wall and frisked him. One of the suited men, a calm grandfatherly type, explained that they didn't want to frisk me, but told me to place my purse on the desk, and please open my jacket so that they could check if I had anything "funny." Did these people actually think I could be carrying a gun? I opened my jacket, and then they had me sit down in one of the metal folding chairs against the opposite wall. Semyon was directed to sit also, but a few chairs away from me.

A man sat down across the desk from us, and told us that his name was Rocky. He didn't give a last name. He went through Semyon's wallet and my purse, passing items of interest to the security guards, who then brought them into an anteroom to photocopy them. I felt vaguely nauseous as I watched these people copy my driver's license, student ID, and MIT health plan card, which had my father's name on it. I knew that all of the proceedings were illegal, but it was clear to me that protesting to this effect would do no good. I tried instead to

appeal to the grandfatherly-looking man. I smiled bravely. "I bet you have granddaughters about my age," I said.

"No," he replied, not unkindly. "But I do have granddaughters." I then decided to keep my mouth shut, take my cues from Semyon, and hope for the best.

Rocky basically ignored me, and spoke directly to Semyon. It seemed that they hadn't quite figured out exactly how he was playing, and they wanted him to tell them. They explained that Caesars had just changed its \$5000 chips to a new design, and if Semyon refused to tell them his strategy, they would direct their cashiers to refuse to cash out his cache of old chips. The only problem with their plan, however, was that we had just lost the last of the old chips in our \$50,000 debacle. They had nothing to bargain with. Semyon went back and forth with Rocky for a while, and when it became obvious that they weren't going to get any information, they gave us papers to sign stating that we had been barred from Caesars Palace, and that if we returned to the property, we would be arrested for trespassing. Then they had us stand, and they photographed us, front and profile, against a wall with heights marked out with black lines.

Semyon and I each flashed a big smile for our photos; it was partly a sarcastic show of defiance, and partly an effort to distort our faces so that the photos would be less useful when Caesars circulated them to other casinos.

The security guards escorted us to our room, where they waited while we packed up our things, and then they walked us out of the casino. Semyon called our teammates, gave another grim report to top the news of the big loss, and we arranged to meet at their hotel rooms. Word from the rest of the team was not very good either; most of the other half-dozen or so players in town were also

posting losses, and the total team result was a loss of over \$150,000. With one day left to play in the weekend, it looked increasingly unlikely that we'd be able to dig ourselves out. We conferred about plans for the following day's play, considering who should play where and with whom in light of recent events. Of course, Semyon and I split up. It was doubtful that Semyon would be able to play anywhere for the rest of the weekend anyway, because Caesars had certainly faxed our photos all over town. I would have trouble too, but some of the people on the team thought that I might be able to continue to play if I didn't play in a way where I was openly associating with one of the team's big players. So we decided that the next day I would play with James M., Richard, and Laurie. Richard was a Chinese-American man and Laurie was his Chinese-born wife; together they made a quite convincing high-roller couple. James M. and I would pretend to be a couple as well, but the plan was that we would sit unobtrusively at Richard and Laurie's table, betting table minimum and tracking aces for Richard while he and Laurie counted cards and bet big.

The session that the four of us played together was the only bright spot of the weekend. At the casino where we played, Richard and Laurie's act went over extremely well. James M. and I traded off tracking aces, and both of us succeeded in landing several of them on Richard's \$5000 bets. Richard's good fortune attracted the attention of passersby, and soon there was a crowd of people standing behind the table, watching the crazy guy who was betting \$15,000 a round and winning. We played for nearly two hours, at which point the casino's attitude toward our table started to change. James M. was recognized, and told that he could no longer play there. He and I slinked off, and then shortly thereafter the same thing happened to Richard. These barrings

were much easier to take, however, when I found out that Richard had won \$70,000 in the 2-hour session.

Unfortunately, the rest of the team hadn't fared as well. The team had a huge net loss for the weekend, almost a quarter million. While this kind of loss was not probable, it was still statistically possible; however, the loss so rattled the people in charge of managing the team that they decided to end the current bank. The breaking up of the team into factions that had differing degrees of agreement and disagreement with this decision soon followed. After that, I went on one more trip with one of these subgroups to Puerto Rico over New Year's. I got to do more ace tracking, and even went to the beach a few times.

Although I still enjoyed blackjack, when I returned to Iowa for my second semester of graduate school, I decided to stop playing. Logistically it was too difficult to continue to keep up my skills and find time to go on trips while remaining in school. Quitting school to play blackjack was an option, but I never considered it. Having it as a hobby or a short-term job was great, but I didn't think I could do it to the exclusion of all else. Being in graduate school suited me better in regards to the way I wished to spend most of my time. Besides, on the MIT team only a handful of players actually made their living at card counting. Though I liked them very much, there was something that set me apart from people like Semyon, James M., and John C. I couldn't quite put it into words, but I knew that in terms of attitude as well as skill, I wasn't cut out to be a full-time, professional card counter.

In Prairie Lights a few years later, I came across a new anthology called Literary Las Vegas. I bought a copy, and mailed it as a gift to my former mentor, James M. He emailed me thanking me for the book, and invited me to join a small blackjack team. James explained that he had left the MIT groups because of personal differences, and was currently playing with a team of about ten people who were scattered around the country and who kept in touch via email. This team had a much smaller bankroll, and played for much smaller stakes. The team's checkout structure approved people first to play a fifty dollar unit, and then a hundred dollar unit. James M. assured me that the team's checkout was much less demanding than MIT's had been, and he was confident that with a few weeks practice, I'd be able to pass it.

I received this email while I was in my last semester of coursework for my English degree. My schedule was about to become more flexible, and the prospect of a few trips to Las Vegas that summer to count cards again appealed to me. The team also utilized a slightly different strategy than I had played before—a technique known as "backcounting," or "self-call-ins." In this style of play, a player would stroll around the blackjack pit, standing behind tables and keeping the count until discovering a significantly positive count, at which point the player would sit down at the table to bet. It was a way of camouflaging spread that was somewhat more obvious than the elegant call-in game with its big player and multiple spotters, but James M. assured me that it was working. In this style of play, I'd have the opportunity to be a big player of sorts, though with bets in the hundreds instead of the thousands. I was twenty-four, still a very far cry from being big player material, but the stakes were small enough that I might be able to get away with it. Because James M. vouched for it, I trusted the statistical soundness of the team's play method, and so, in spite of the team's dorky name (the Chameleons), I joined.

The trips with the Chameleons were very different from those I had taken with the MIT team. We played from a common bankroll, and we would go on trips together, but since the style of play was solo, we didn't need to coordinate the trips themselves very tightly. Usually three or four players would be in town on a given weekend, and we would stay in each other's comped hotel rooms, meeting for practice, checkouts, and meals. The rest of the time we were off playing on our own at various casinos, and phoning in our results to the team voicemail. I liked backcounting well enough, though all of the walking it required could be tiring if you didn't bring the right shoes. I spent most of the time marching up and down the pits looking for a table with a count that was positive enough to warrant betting, which happened only two or three times an hour. I would call myself in, and then bet in hundred-dollar increments, up to two hands of six hundred. I definitely stuck out at the tables (only once did I see another woman in her mid-twenties betting my stakes), but because I was in and out so fast, the casino personnel didn't have much time to register me and get suspicious. I did try to dress up, and I had a story for what I did for a living—I told people that I spent my father's money. I even giggled when I said it, but I don't think it was all that convincing.

When I had passed the one-year mark of playing with the Chameleons, I was ostensibly spending the summer doing research for my dissertation, which I mostly remember as drowsing on the couch in my apartment with a book on my lap. It was hard to face up to the daunting task of actually having to formulate a thesis and write something. I went to Las Vegas several times instead.

The team was doing fairly well, and I had my regular round of casinos that I played that would comp me to rooms and meals. My favorite place to play

was the MGM Grand. The casino was huge, with 80 + blackjack tables, and it was very easy to play for hours and hours, rotating among the different pits so as to avoid attention. The comps were great there, too. Once I was established as "RFB" (room-food-beverage), I had a nice room, access to the spa, and a free pass to all of the gourmet restaurants. It could have been a good vacation if the MGM hadn't required me to log so many hours at the tables to earn it.

Eventually, however, the party ended for me at the MGM Grand, as my past at Caesars Palace caught up with me. One evening on the casino floor, two casino manager types walked up to me. One of them introduced himself, and then the other man. I don't remember either of their names, but I do remember that he made a point of telling me that the other man was from Caesars Palace. They asked to see my ID, and I knew that this was it. I fumbled around in my purse, and told then that my ID was up in my hotel room. By this time more suited men had shown up, along with a few security guards, and I was surrounded. They told me in no uncertain terms to get my ID. Heart pounding, I turned around and tried to recall all of the possible exits. As I entered the elevator, I remembered a tour bus passenger entrance that was one floor up, and so I got out at the next floor, half-ran to that entrance, and made it out to the Strip sidewalk without further incident.

Even though it was obvious that they had let me escape, I was still pretty shaken; it was my first bad incident since returning to playing. I put in a call to the team voicemail to explain what had happened, and to ask for a volunteer to help me to get my stuff out of my room. Rob, the first teammate to hear my message, met me a couple doors down from the MGM, and offered to go to my room to pack my things. We thought of several different scenarios: What if

what if they've emptied the room? Rob thought the best thing to do was just for him to go and see what happened. If for some reason he couldn't get in the room, the worst thing would be that I would have to go down there with him later to get my stuff. I would most certainly be barred from the MGM, but at least probably not backroomed. It didn't make much of a difference at this point, as my play at the MGM was effectively over anyway.

Rob had an uneventful trip retrieving my things from the room.

Apparently the MGM felt that they had done an adequate job of scaring me off.

They didn't revoke my comps either, which would have meant sticking me with a bill for all of the expensive living my teammates and I had done there that weekend. Another one of my teammates got me a hotel room on his comp at another casino, where I stayed for the rest of the trip. I changed my hair and donned my glasses for the rest of my time at the blackjack tables. I got some looks, but no real heat.

Though the MGM incident was a little scary, it wasn't all that big a deal. There were still plenty of places that I could play, but when I returned from that trip, I wasn't sure that I wanted to keep playing. I was getting a little bored with blackjack, and I felt that I should be giving my dissertation more attention. Quitting blackjack seemed like the only way to make my dissertation a priority, which was what I needed to do if I wanted to actually write it. I also had a fellowship year coming up that fall, which meant that I could probably accomplish a lot of writing if I put my mind to it. I decided to quit counting cards. But before I did so, I wanted to go on one more trip.

In late August, a new casino was opening in Michigan City in Indiana, and I wanted to play there that first weekend. The general chaos that ensued when inexperienced dealers were implementing new skills and procedures could make a card counter's job much easier. It was the last trip I anticipated taking for the foreseeable future, so I decided to be more aggressive and obvious with my play in the hopes of winning more money. Sharing my optimism that I would find a lax and mistake-prone environment, my teammates approved my plan to bet up to almost double what I normally bet: I intended to range from one hand of \$50 to 2 hands of \$1000. Sure, I would probably get kicked out, but so what, it was my last trip.

When I arrived at the casino, it had already been open for about a day and a half. I started in on backcounting to see what conditions were like. The dealers were indeed almost all new, and the higher-ups watched them closely to make sure they handled the money and chips correctly. The casino personnel seemed determined to accept my big bets graciously, though I was one of only about three people in the casino betting more than twenty-five dollar chips. The other two people consisted of a woman who looked to be in her fifties who was betting one or two hundred dollars a hand, and a young, smartly-dressed businessmantype who played only five hundred dollar chips, sometimes going as high as two thousand dollars a hand. Why people like that came to play at a casino in Indiana, I didn't know.

My own play was going well enough, though I wasn't building much of a swing either up or down. When the count went up and I put out big stacks of black chips, often a small crowd would gather behind the table to watch. I could see by their puzzled expressions that, as usual, my act didn't compute. One man

seated at my table suddenly said to me, "You're a tennis player. You're a tennis player who just won a big championship, and you're here to celebrate." I smiled and gave him my usual line about spending my father's money. At another table a man betting green chips told me that I looked familiar, and asked if I had ever played at the Monte Carlo casino in Las Vegas.

"Yes, I have," I replied. "Was I losing when you saw me? I lost big there."

"I used to play big myself. But someone else plays big now, if you know what I mean."

I looked at him, and then over at the only other person at the table. The smartly-dressed businessman with his stack of five hundred dollar chips winked at me. I laughed at my own obliviousness. Another team, a call-in team, was in the casino, and we were playing at the same table.

I watched the big player for a while. His act was quite good. He had an Italian accent (which I later found out was affected when he brushed by me in a crowded passageway and muttered, "It's a candy store, man," in distinctly American tones), and was very adept at chatting up the dealers, the floor personnel, and basically anyone who would listen to his convoluted explanation for why he happened to be passing through this particular resort town on Lake Michigan. I determined who at least three of his other controllers were; it was a motley group of dressed-down men and one woman who all looked to be about thirtyish. I was able to figure out their signaling system as well by counting down their tables, and watching what happened when the count got high enough to call in the big player. They were doing fairly well, it seemed; their big player looked to be up about thirty or forty thousand.

For myself, the trip wasn't very eventful in terms of overall result. After two days of big betting, I was basically even, up only a few hundred dollars. As predicted, I did get kicked out. However, the casino had been running a cashback incentive program as part of its opening weekend, and I argued with the shift manager that they couldn't make me leave before they had paid me the \$450 that my betting that weekend had earned me. Miraculously, in exchange for getting a look at my ID, the casino did pay me the cash, and my last trip ended, if not with a big win, at least with a good story. I also left with the phone number of the other count team's controller. We had met for a drink the night before, and he had been very impressed to learn that I had played with the MIT blackjack team. He had heard a lot about the team, and was interested in playing for them himself. I told him that I would get in touch with the people I knew who were still playing, and see if it was OK for him to contact them.

For myself, I was done with blackjack, and doubted that I would ever play again. I treated myself to a new bed with part of my winnings, and prepared to start a new semester. I had a fellowship, and intended to really devote myself to my dissertation. But I had also registered for an introductory film production course that fall. I figured that since I wasn't teaching, I'd have plenty of time to learn how to make films as well as get prodigious amounts done on my dissertation.

About two and a half years later, I was still working on my dissertation, but only when I wasn't working on a film. My dissertation director was a big advocate of what he called "productive procrastination"—procrastinating by pursing another activity in a careful and systematic way. He said that I was the

most productive procrastinator he'd ever advised, because my procrastination had taken the form of actually enrolling in another degree program, an M.F.A. in film and video production. In the spring of 2000, when I looked back on the films I had made to that point, it even seemed like I had chosen subjects that were themselves related to ways I had procrastinated on my dissertation. Like a good Ph.D. student, I had chosen a topic related to my dissertation for my first film, but other of my activities that had helped me to put off writing the dissertation, such as volunteering at a food bank and arranging to have my roommate's cat's tail taxidermied, had also inspired films. When it came time to propose a thesis film, it seemed logical that it should be a monument to the most involved form of procrastination I had engaged in while in grad school: card counting.

While I do think that not wanting to write my dissertation did have something to do with my beginning to make films when I did, I had other reasons for wanting to make my thesis project about card counting. For one, it was a topic that I knew was rife with the kinds of absurd paradoxes and humor that had heretofore captured my imagination as a filmmaker. It was a strange corner of human endeavor that rarely had been treated in any interesting depth in film, or literature, for that matter. Approaching it in documentary form appealed to me as well, as I hadn't yet made anything I considered a documentary, and I wanted to try. To keep the project in the realm of a style in which I was practiced, I envisioned the video as a series of ten or so related three-minute pieces about card counting. I was fairly confident that I would be able to string together a series of complete or semi-complete short films into a whole.

In my first few months of work on the video, I started by contacting some of my old team associates and setting up interviews. In hopes of getting them to consider my video as more than just a "school project," I tried to impress people with the awards that my previous films had won, until I began to realize that my MIT blackjack pedigree was the only credential they really cared about. James M. was my link to Stanford Wong, noted card counting theorist and author, and an email from me with John C.'s name as a reference received an enthusiastic response from Max Rubin, another published member of the blackjack world. Contacts that could have taken months to cultivate had I come to the topic cold were falling into my lap.

After about three months of collecting interviews, however, the need to come up with another kind of footage became more and more pressing. I knew there had to be more to my movie than just former card counters and writers talking about card counting. I had to find some card counters who would let me tape some of their activities. I thought that if I could go on a trip, and get some shots of scenes that were familiar to me—people dealing practice to each other, staying in comped hotel rooms, counting out the day's win—I could start to build my three-minute pieces around different themes. Although I didn't yet have any clear ideas for the individual pieces, I was still interested in this kind of approach. A continuous half-hour documentary seemed that it would demand more unity than the kind of footage I was likely to get would provide.

I made some calls to find out what teams were still around, and to see if I could talk anyone into letting me go on a trip with a camera. I figured I needed to find a player who was about to end his or her blackjack career, and who thus wouldn't mind having his or her face shown. It seemed too like it would be an

interesting career point at which to represent a card counter; presumably the player wouldn't be so gung ho anymore and would have some interesting insights to share.

I called my old teammate Tony, who as far as I knew was still playing with one of the subgroups of the MIT team. He told me that the MIT team was pretty much dissolved at the moment, though a few people were playing together on a small bankroll. The team had gotten too big, and no one wanted to manage it. The team that was really dominating the scene, he explained, was a new team that had been started by the players I had seen at the casino opening in Indiana. Apparently the player I had put in touch with the MIT team had played for both teams for a while; then when his team grew and the MIT team was falling apart, several MIT players had joined his team. Team "X," Tony said, had as big a bankroll as MIT ever did, was playing a very aggressive call-in style game, and was winning a lot of money.

The person who ran Team X was a woman named Maria. She, like several of her original teammates, was a former attorney who had quit her job to pursue card counting full-time. One of the several differences between the MIT team and Team X was that while the MIT team was primarily made up of people who played blackjack as a sort of hobby, Team X had a greater proportion of people who played blackjack full-time and who thus considered it their business and livelihood. I ran up against this difference in my first phone conversation with Maria. Tony had explained to her my proposal of videotaping with the team, and she was deeply skeptical. She made it clear that the only reason she was even talking to me was that I had played with the MIT team—"Those guys did blackjack the best way it could be done for years," she said. In cold business

terms, she explained that the team had talked it over, and that frankly they saw a lot of potential downside and not much upside. From my end, it was a hard point to argue with. I told her that I hoped that my movie would sway public opinion onto the side of card counters (it would be a counter to the casinos' disinformation that card counting was illegal, or at least somehow cheating), and that it might be nice for her team to have some footage of their activities. She said she'd think about it some more, and talk to the team again.

During my next contact with Maria, she had a stark proposal for me: the team would let me tape with them, but on the condition that they would view the final cut and that I would take out anything they didn't like. I explained that I couldn't do that, because it wasn't worth my while to make a movie over which I didn't have control. I told her that I thought it was totally fair for the team to be able to select what footage of them went into the movie, but as far as how it was used, edited, and integrated into the final piece, I needed to have control.

Because she didn't reject me out of hand after I said that, I knew that she was at least intrigued by the project, and possibly interested in finding a way that it could work. I ended up giving her a short list of the kinds of things I wanted to shoot, and she said that she would again talk it over with the team. About a week later she got back to me, told me that the list was fine, and that the team would be in Las Vegas over Memorial Day if I wanted to come out then.

I arranged a trip to Las Vegas for that weekend, bringing my friend and volunteer DP Karen out to help me shoot. In addition to the team shooting, we also scheduled interviews with Stanford Wong and Max Rubin, and made a shot list for Las Vegas exteriors. When we got to Las Vegas, however, Maria told me that Team X had changed its mind about me shooting that weekend. I think she

felt a little bad giving me such short notice, because she invited me to come over to the team's location to meet people and have a chance to persuade them myself. I sent Karen out to shoot Las Vegas glitz, and then headed for the address Maria had given me over the phone.

When I arrived at the place, which looked like thousands of other spacious, recently-built homes in the Las Vegas suburbs, I knew that I somehow had to find a way to shoot there. About twenty people were milling around the first floor, playing or standing near one of the four blackjack tables. Flyers with titles such as "Team Rules" and "Current Signals" were posted on the walls. Upstairs was an office with a white board that listed the team's current result for the trip in progress, and listed the people currently out playing and where they were. Every so often a group of players would come through the front door, either enthusiastically or dejectedly report a result, and then commence with a story from their recent play session. The scene felt partly like a college dormitory and partly like the offices of a dot-com startup. It was the most intense blackjack scene I had ever seen.

Maria turned out to be both friendly and intimidating. She greeted me, and introduced me around to the players in the vicinity. Although I could tell right away which ones were interested in the documentary and which ones were not, everyone was polite. Maria suggested we go out to the back deck to chat, and we joined the three or so other people already sitting out there. One of them was one of my old Chameleon teammates, Andy, whom I was glad to see. We talked for a while about the old team, and Andy explained how Team X was different, more aggressive, more profitable. Then Andy suggested that I join the team.

At first, I brushed him off. I was done playing blackjack; I was only making a movie about it. However, as Andy bragged to the Team Xers about how fast I had passed the Chameleon checkouts, and asked if I would tell them about some of my adventures with the MIT team, it occurred to me that from the standpoint of furthering my movie, joining the team made a lot of sense. It would give me an opportunity to get to know these people and build their trust; it would give me a reason to hang around and think about what I might like to shoot, and to determine the likelihood of Team X permitting me to shoot those things; and, if the team was as profitable as Andy said it was, it could be a good way to augment the budget. I started the spotter test that evening, came back the next day to pass it, and after that, I was officially a member of Team X.

The way that Team X ran their trips was very appealing to me in terms of shooting possibilities. They planned a trip that would last a certain number of days, usually the four or five days around a holiday weekend, gather up a bankroll from the managers and players, and then schedule players to come in for the weekend, with the understanding that they would be there for the purpose of logging as many playing hours as possible. The team housed all players, and paid for all food and transportation within Las Vegas. At the end of the weekend, the win would be divided up among the players, player/investors, and manager/investors. If the team didn't win, which happened about once every eight trips, the investors took the loss, and even picked up the players' airfare.

With such a format, Team X had created a strong incentive for players to play as much as possible during a trip in order to maximize the value of their

time. They had also streamlined the playing process; decisions about who to send where at what time were made by the upper management, who kept meticulous records of each player's heat history at each casino. Players would head up to the office to look at the white board to see where they were slotted for play on a particular shift, or the managers would come downstairs and announce the day's play groups. Then the groups would head off to separate areas of the house to discuss the particulars of the play session ahead of them, and then a small fleet of cars would pull out of the driveway and disperse into the tourist traffic on Las Vegas Boulevard. The groups kept in touch with home base via cell phone, always calling in results, and sometimes calling for advice on a particular situation: a casino had ended a play unexpectedly fast, where should we go now; a casino is refusing to cash out our chips; a player is in imminent danger of being herded off to the back room.

It was during my time with Team X that I completely abandoned the separate- short-piece format that I had originally planned for my video. It now seemed like I had a chance to tell the story of an entire trip, one that would be more intense than trips had been with either of the other teams I had played with. I negotiated with Maria and two of the other managers, Josh and Vic, about the kinds of footage I wanted. After getting to know me and talking more about the project, they had warmed up to the idea considerably; however, there was still a lot to work out in terms of access. Basically, Team X wanted assurances that nothing that would compromise their ability to continue to make money at blackjack be revealed in the video. This included preserving the anonymity of its members, and not disclosing information about their style of

play that was specific to the team. I worked up a shot wish list that respected these desires, which we then discussed.

Although I really, really wanted to shoot at the house, the managers and players were split on whether that should be permitted. What we agreed on instead was that I would shoot during a trip to Atlantic City. There would be fewer people on an Atlantic City trip, and since it wasn't a permanent location for the team, fewer security concerns. All players would be notified that shooting would occur on this trip, and players who didn't want to participate in the video could decline to go on the trip. The arrangement we arrived at for shooting was that my DP and I would have carte blanche to shoot whatever we wanted during the trip, but the managers would review the footage with me at the end of the trip, and give me selective permissions. I was comfortable with this arrangement because I already had an idea of the kinds of things they were likely to approve, and I was confident that I could get enough of those things to make the video I wanted to make. So Karen and I planned to go to Atlantic City.

In the weeks preceding the trip, I obsessively made lists of shots, and contacted particular team members whom I wanted to interview. I had never conducted a direct cinema-style shoot before, and I knew that I needed to make as many decisions as possible before shooting to have any kind of chance at capturing what I wanted. In retrospect, it was naïve of me to have assumed that a blackjack team would have granted me this kind of access without the process that I first went through with Team X. It was also naïve of me to assume that I could have gotten any kind of good quality footage by just showing up on a trip with a bunch of blackjack players. Because I had been on a few trips as a player with Team X, I actually knew a great deal about the different events that

happened or were likely to happen on a trip, and I knew what I needed to get on tape in order to be able tell the story of a trip in its entirety. I also had gotten to know the personalities of the people on the team, and I had a sense of who would likely be an entertaining subject, and who had a particularly interesting perspective. I was able to brief Karen on who was who, and to suggest specific people for us to follow during the weekend. Because we were such a small crew with only one camera, I needed to be prepared to make choices about what activity to follow at a given moment, and it was the time I had spent with Team X leading up to the shoot that had prepared me for this.

As expected, the shoot was intense. (I had also foolishly agreed to also play for the team on the same trip I was shooting, which made for a particularly exhausting weekend for me.) Karen shot, and I ran sound. I knew that because I wouldn't be showing faces, I had to have good sound, so that was the aspect I wanted to control myself. It also freed me up to be cognizant of what was going on, and to direct Karen to change her framing as I saw other events unfolding. I had instructed Karen to try to compose shots to frame out faces as much as possible, but not to worry and jerk the camera if she happened to capture a face. I had no idea at this point what it would take in terms of time, effort, and software to block out faces; I just glibly told her, Team X, and myself that it wasn't a problem, I'd get to it later.

Over four days, Karen and I shot about 10 hours worth of footage. Then Karen left, and I stayed an extra day with Maria, Josh, and Vic to review the footage. It was not an ideal situation, as I was physically and mentally exhausted, and not in the best state to watch perfect footage go by on the screen and be told that I wouldn't be able to use it. There were some tense moments

when it seemed that Team X was going to veto whole categories of images that I felt were necessary to my project. I did have to let some things go that I had really wanted, but I reconciled myself to this situation by telling myself that all documentaries are made out of available footage. The sooner I put the prohibited footage out of my mind as unavailable, the faster I would stop including it in my mental log. I even deleted several scenes that I was certain they would never, ever let me use before I left Atlantic City. Why put myself through the pain of scrolling through them on my tapes? I also hoped that deleting them then and there would demonstrate to Team X how seriously I took our agreement.

I left Atlantic City with my tapes and a set of preliminary permissions from Team X. For some of the images that they considered borderline, they wanted to see the use in context, and then decide. It wasn't my choice of how to end the review session, but because I believed I would probably want several of the borderline images, I had to agree. It would be up to me to decide to what degree to use the borderline images in my future edits, risking the prospect of a lot of frustration if upon seeing them Team X decided not to give me permission to use them. At that point, however, exhausted, demoralized, and suffering the despair that often sets in after the first viewing of raw footage, I was happy to defer all decision-making to the future.

As I logged the team X footage over the next few months, I tried to work out some kind of structure for my video, and to think about what kinds of expectations I would be able to set up and actually meet with the footage I had. It seemed to me that the biggest problem was that I had no footage inside

casinos. I hadn't even tried to get this kind of footage, mainly because I thought it would be impossible to get decent-looking footage and sound on the sly. I also rationalized it by reminding myself that all TV documentaries about card counters showed them in casinos, but what was more interesting was what they did when they weren't in the casino. Inside the casino was pretty predictable, at least to my own jaded eye: you push money out on the table over and over, and you end up winning a little more than you lose. Nevertheless, it seemed that on a basic level that if the movie is about people who play blackjack in casinos, at some point we should see them playing blackjack in a casino.

Another problem I had was that of imparting information about the rules of blackjack and the basics of card counting in a way that would be aesthetically effective. Simply determining what level of detail to go into took a while. I didn't want to make an instructional video...or did I? I first thought about appropriating preexisting instructional video footage into the piece; I bought several blackjack videos, including "The ABC's of Winning Blackjack" with Telly Savalas (the trenchant Savalas quote on the back cover was "Nobody likes being a loser...especially at blackjack"). What inspired me about the Savalas video was the way that it conveyed much more information than merely the rules of blackjack. It was an advertisement for blackjack, portraying the game as easy yet sophisticated, a "step up" in status from the slots. Telly wore a tuxedo and tried to get me to believe that a casino was an elegant, thrilling place to spend my time and money. I realized that this kind of footage could not only teach the audience a little about blackjack; it could also communicate the casino industry's own perspective on the game, and the ways it tried to persuade the public to play it. Shooting my own instructional video was obviously the way to go; I could script

it to provide exactly the information I wanted, and write the lines and coach the actors in order to concisely convey the casino's perspective, or more accurately, my take on the casino's perspective. I hoped also that the instructional video would at least partially satisfy the audience's desire to see action inside a casino.

Then I realized that I needed to make an instructional video for card counting as well, and use a similar strategy of imparting attitude along with information. Putting a card counting lesson into an instructional video format struck me as intrinsically funny, and with my set and script I tried to replicate the experience of sitting with an MIT graduate student in his Central Square apartment as he began to teach you how to count cards. I thought about the two sets in contrast to each other: the casino would be an obvious set, with threepoint lighting and black velvet, and the card-counter apartment would be a dining room set up to look like a set—strategically placed physics and math books, wooden door, flat lighting. The card counter would explain patiently, with just a hint of smug pleasure at his own cleverness, while the casino host would explain obsequiously, with a lot of canned patter and corny asides. I thought about intercutting the two videos to heighten the clash of statistics and showmanship, and having this conflict culminate in an invasion of the casino video by the card counter, whose presence exposes the casino video people as the money-grubbing bastards that they are when they go through a by-the-book barring.

Writing, shooting, and editing these "videos" was one of the best parts of making the project. I relished the opportunity to write a script, put together sets, and direct scenes as part of my ostensible "documentary." If I continue to make nonfiction, I expect that I will continue to work this way. I think I tend much

more towards creating images to fit a purpose, rather than creating a purpose to fit the images.

Writing the script for these scenes also pushed me toward writing a paper edit for the entire piece. I had read about paper edits, but I had never fully understood their worth until I was confronted with 20 hours of interviews and direct cinema-style footage. I spent about two months on the paper edit, which I wrote like a script, drawing from visuals and audio that were listed in my logs. Doing this helped immensely in seeing the video as a whole, imparting structure to it, figuring out the themes, and attempting to determine how to balance and integrate the different kinds of footage I had. I realized that the trajectory I settled on mirrored the arc of my own involvement with card counting: thrilled amazement, where each new revelation seems more unbelievable than the last, then a gradual tempering of enthusiasm as drawbacks and complexities emerge. It was also the trajectory that many of my interview subjects experienced, so I didn't feel like I was distorting the footage with my own agenda.

The work of editing the Team X footage was particularly challenging, as I had never before worked with direct cinema-style footage. At this point I had "written" about fifteen scenes using the footage in my paper edit, so I worked at editing these episodes. Not surprisingly, when I actually went back to look at and listen to the footage instead of just reading off notes about it in my logs, I found that in the heat of writing the paper edit, I had remembered it as better than it was. Several scenes that I thought would come together well just didn't, and it was difficult to boil down the action so as to convey meaning to people who didn't know anything about blackjack or card counting. Another problem was that I couldn't get feedback on my work yet because of the promise I had

made to Team X that I would not show the footage to anyone without having blurred out the faces. I had made the promise without knowing what would be involved technically or time-wise, and thinking about it was easy to put off. I did know that I wanted to wait until I was fairly certain what Team X footage I was going to use before I blocked out the faces, which of course created a catch-22 situation: how would I know what I definitely wanted to use before I showed edited footage to people?

By July of 2002, I had edited together about eight Team X scenes, and had put these together with my other footage to make a rough cut that represented about two-thirds of the movie as I had envisioned it in my paper edit. I was definitely at a point where I needed feedback not only on the team scenes, but also on the overall structure of the piece, and so I scheduled a rough cut screening and then spent about two weeks using a software effects program called Commotion to create big ugly black mattes for the card counters' faces. It looked horrible, and was a far cry from the close-fitted blurs that I desired for the final edit, but at that point I didn't want to invest the time in meticulously processing footage that I wasn't even sure I was going to use. I just hoped that the big black blobs wouldn't be overly distracting for my rough cut audience.

The feedback from my rough cut screening was immensely helpful on several fronts. In regards to the team scenes, people suggested cutting them shorter, and trying to find or create little endings for them. The facelessness was not necessarily off-putting in itself, but the audience pointed out that it was very hard to identify with faceless people, and suggested bringing in the interviews with former card counters much earlier; hopefully then the audience could interpolate these faces into the faceless scenes, and they wouldn't be frustrated

by them. The cut that I showed opened with the battle of the instructional videos, which took up the first seven minutes of the movie, and though people liked this footage, they recommended breaking it up and dispersing it through the piece. I was resistant to this suggestion because it meant that the little mininarrative of those scenes would be diminished, and the joke of the card counter getting kicked out of the instructional video would be lost. I was very attached to having these scenes occur, if not as the opening of the film, as a complete chunk somewhere in the piece. The rest of the footage got positive reviews; people liked the interview subjects and thought the excerpts I had selected were interesting. The job before me was to further refine the team scenes, and to establish a new structure for the piece.

I moved to Pennsylvania shortly after my rough cut screening, and set a goal of having another rough cut screening in four months. The time that starting a new teaching job demanded slowed me up, however, and I also ran into my same problem of needing to blur out the faces before exhibiting. I didn't want to put in the work of face blurring again until I was at fine cut stage, but I clearly needed to show the piece at least one more time before arriving at a fine cut. I decided to send a copy to Karen, my trusty DP, who was the only person excepted from my no-show agreement with Team X, for obvious reasons.

In retrospect, the cut that I showed Karen had less severe but ultimately similar problems as the one I had shown in Iowa City. The structure was lopsided; the first thirty minutes was primarily interview and instructional video footage (I hadn't broken it up), and the last thirty minutes were interviews and Team X footage. This structure reflected my conviction that I needed to supply enough information about blackjack, card counting, and team play so that the

audience would be able to fully appreciate the Team X scenes. I had boiled it down as much as I thought I could, but it seemed an insurmountable difficulty, one that I was half-hoping Karen would declare not a difficulty at all, but a bold and innovative way to structure a film.

Karen's feedback was immensely helpful in getting the piece to its next stage. She reiterated the advice about breaking up the instructional video, and because she had a good idea about how to use the staged barring scene, I was more open to hearing it this time. She also assured me that I didn't need to equip the audience with maximal knowledge all at once, and that it was okay to ask the audience to hold some elements in abeyance for a later explanation and payoff. There were two stories: the story of the team's weekend in Atlantic City, and the story of the former counters' progression through card counting, and these were the strands that needed to be at the center throughout the piece. Nearly all of Karen's suggestions made a lot of sense to me, and I was eager to implement them. The one thing from her that didn't resonate with me was her suggestion that I provide some voice-over, performed by me, to clarify the action at different points and possibly to explain my own involvement in card counting. For example, Karen said that it was interesting to her that Jim and Elaine were someone's parents, and that that person had taken up card counting herself, and then made a movie about it. I saw her point, but thought that that kind of material would make it a different kind of movie. It was my story insofar as my own experiences with card counting had shaped the kind of material I sought out and the way I shaped it in editing, but I didn't see it as a personal piece that should literally have my voice in it. I much preferred getting my own voice into film through devices like the instructional video, where I think the audience gets

the sense that this scene has been organized and staged by a person with a particular perspective on the events depicted.

After absorbing Karen's feedback, I got in touch with Team X, and told them that I was ready to show them the scenes that I wanted to use, and to try to get their permission for the kinds of footage on which they had been hesitant to sign off. I flew to Las Vegas to meet Maria and Josh with a tape of the 23 minutes of Team X footage that I wanted to use as contained in the team scenes. There were only a few shots that I thought would be an issue in terms of permissions, but I was also generally nervous about showing them any of the material. It was rough, and had no context, as I had simply stripped it out of the larger video. Furthermore, in the course of playing with Team X and working on the video with them, I had come to really like Maria and Josh, and I wanted them to like my video. After all, after Karen, they were the people who had put the most time into helping me with the project.

I was relieved and gratified when Maria and Josh did like what I showed them. The discussion about permissions was much less tense than it had been on the day after the trip in Atlantic City, and I ended up being able to use almost everything that I had put on the tape. Although they had been dubious about it when I had suggested in my first negotiations with them that they might like having a record of their team's activities from that point in time, now they said they were really pleased, for just that reason. I promised them all copies of the final piece, and made my pitch for why they should come to my thesis screening in Iowa City. I told them that it would be wonderful to have them there to share in the celebration of the piece's completion, and besides, the riverboats were only an hour away.

As I write this, it's still too early in the editing process for me to comment definitively on what I think I've achieved with the piece as a whole. The process of making the piece, however, taught me a great deal about a kind of filmmaking that for me had been heretofore untried. "Counter Culture" is unlike my earlier work in several ways. It's largely unscripted, composed mainly of footage that was captured "as it happened," whereas my other films, even my nonfiction pieces, have been tightly scripted, and the shooting tightly controlled. It's also about 10 times longer than any other piece I've made, which has presented certain challenges in terms of editing and pacing. My style in my other pieces has been fairly rapid-paced, as I've used a strategy of surprising the audience with something unusual, taking them on a fast ride through a story or situation, and then ending the piece quickly and at a point where the idea I've planted in their minds is still strange. With this video, I've had to figure out how to acclimate my audience to the topic, and also build time for contemplation into the piece itself.

It's an adage of documentary filmmaking that you shouldn't choose a subject about which you already know everything, because then you as well as your audience will both be bored. I can't say that I initially approached card counting as a topic that I wanted to learn more about; in fact, I chose it precisely because I thought I knew enough to make a movie about it. In the course of making the video, however, I did learn a lot, and I think my video is the better for it. For example, the history of card counting was largely unknown to me, and finding out that some experts think that card counting is responsible for the huge popularity of blackjack was incredibly interesting, and was just the kind of

paradox that I wanted to present in my film. And experiencing first-hand the intensity of Team X's style of play gave me new insight into the interconnected financial and emotional motivation that I believe is at the core of team card counting.

Although making this video has been a very positive experience overall, it hasn't won me over to direct cinema or cinema verité filmmaking. At least at this point in my filmmaking career, the way that I conceptualize ideas and conceive of potential pieces is still very much in terms of scripted stories or staged events. I do think that the approach I chose was the best way to make this particular video, because what initially intrigued me about card counting was that it was a real thing that existed in the real world, and it was clear to me that I needed to make a documentary in order to fully convey that. I suppose it's conceivable that if I hit on another topic that I think needs to be a documentary, I'll make another one, but I'm pretty eager to get back to writing and directing short scripts for the foreseeable future.

As for card counting, I doubt I'll ever go back to it. It takes a lot of time and energy to do it well, and I have other ways that I'd rather spend my time. Which is not to say that I won't keep up with my card-counting friends, hang on their every word when they tell me their adventures, and feel proud that I too was once good enough at playing blackjack to win money, get kicked out of casinos, and have my picture faxed all over Las Vegas.

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