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- Main page
- Contents
- Featured content
- Current events
- Random article
- Donate to Wikipedia
- Wikimedia Shop

Interaction

- Help
- About Wikipedia
- Community portal
- Recent changes
- Contact Wikipedia

Toolbox

Print/export

Languages

- Français

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Article Talk

Read Edit

Search

# MIT Blackjack Team

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The **MIT Blackjack Team** was a group of students and ex-students from the [Massachusetts Institute of Technology](#), [Harvard Business School](#), [Harvard University](#), and other leading colleges who used [card-counting](#) techniques and more sophisticated strategies to beat [casinos](#) at [blackjack](#) worldwide. The team and its successors operated successfully from 1979 through the beginning of the 21st century. Many other blackjack teams have been formed around the world with the goal of beating the casinos.

**Contents** [hide]

- 1 Blackjack and card counting
- 2 First MIT Blackjack "bank"
- 3 "Mr. M" Meets Bill Kaplan
  - 3.1 Kaplan observes [Massar](#) and friends in action
  - 3.2 Kaplan capitalizes a new team
- 4 Strategy and techniques
- 5 Team history 1980-1990
- 6 Strategic Investments 1992-1993
- 7 1994 and Forward
- 8 Casinos' Responses
  - 8.1 Legal
  - 8.2 Game Changes
- 9 In the media
  - 9.1 Books
  - 9.2 Films
  - 9.3 Television
  - 9.4 Other
- 10 References
- 11 External links

*Isao v. Desert Palace, Inc., No. 09-16233 archived on November 21, 2012*

## Blackjack and card counting

[\[edit\]](#)

*Main article:* [Card counting](#)

**Blackjack** can be legally beaten by a skilled player. Beyond the [basic strategy](#) of when to hit and when to stand, individual players can use [card counting](#), [shuffle tracking](#) or [hole carding](#) to improve their odds. Since the early 1960s a large number of card counting schemes have been published, and casinos have adjusted the rules of play in an attempt to counter the most popular methods. The basic theme of card counting is that since a low card is usually bad and a high card is usually good and since the cards that have already been used since the last shuffle cannot be at the top of the deck and therefore cannot be drawn, the counter can keep track of the high and low cards that have already been played and know the probability of getting a high (10,J,Q,K,A) as compared to low, (2,3,4,5,6).

Six MIT students and residents of Burton House at MIT taught themselves card-counting in 1979. Determined to put their newly discovered knowledge to work, the group traveled to [Atlantic City](#) during spring break of 1979 to win their fortunes. After this, the group went their separate ways when most of them graduated in May, some never gambling again, but two members, J.P. Massar and Jonathan, maintained an avid interest in card counting and remained in Cambridge, MA, home to MIT. They offered a course on blackjack for MIT's January 1980 Independent Activities Period (IAP), during which anyone can teach pretty much anything.

## First MIT Blackjack "bank"

[\[edit\]](#)

In late November 1979, a professional blackjack player contacted J.P. Massar after seeing a notice in the IAP Guide for a blackjack course to be taught in January at MIT, and proposed forming a new group to travel to Atlantic City to take advantage of the [New Jersey Casino Control Commission's](#) recent ruling that made it illegal for the Atlantic City casinos to ban card counters in general, but rather they would need to ban the players individually from the property.

Consisting of four players (Roger, J.P., Jonathan, and the professional blackjack player, Dave) and an investor who put up most of its capital (\$5,000), this group went to Atlantic City in late December to play. The players then held the January IAP course and recruited a number of additional MIT students as players. The group played intermittently through May 1980 and increased the capital roughly four-fold but was nonetheless more a loose group of players sharing capital than a more coherent team with consistent strategies and quality control.

## "Mr. M" Meets Bill Kaplan

[\[edit\]](#)

In May 1980 **JP Massar**, known as "Mr. M" in the [History Channel documentary](#), overheard a conversation about professional blackjack at a Cambridge Chinese restaurant. J.P. introduced himself to the speaker, Bill Kaplan, a 1980 Harvard MBA graduate who had run a successful blackjack team based in [Las Vegas](#) three years earlier. Kaplan earned his BA at Harvard in 1977 and deferred his admission to Harvard Business School for a year, during which time he moved to Las Vegas and formed a team of blackjack players based on his research and own statistical analysis of the game. Staked by funds he received upon graduation as Harvard's outstanding scholar-athlete, Kaplan generated a 35+ fold [rate of return](#) in less than nine months of play during this "year off."<sup>[*citation needed*]</sup>

Kaplan continued to run his Las Vegas blackjack team as a sideline while attending Harvard Business School but, by the time of his graduation in May 1980, the players were so "burnt out" in Nevada they were forced to hit the international circuit. Not feeling he could continue to manage the team successfully while they traveled throughout Europe and elsewhere, encountering different rules, playing conditions, and casino practices, Kaplan parted ways with his teammates, who then splintered into multiple small playing teams in pursuit of more favorable conditions throughout the world.

### Kaplan observes Massar and friends in action

[edit]

After meeting Kaplan and hearing about his blackjack successes, Massar asked Kaplan if he was interested in going with a few of Massar's blackjack-playing friends to Atlantic City to observe their play. Given the fortuitous timing (Kaplan's parting with his Las Vegas team), he agreed to go in the hopes of putting together a new local team that he could train and manage.

Kaplan observed Massar and his teammates playing for a weekend in Atlantic City. He noted that each of the players used a different card counting strategy which were overly complicated. This resulted in error rates that undermined the benefits of the more complicated strategies. Upon returning to Cambridge, Kaplan detailed the problems he observed to Massar.

### Kaplan capitalizes a new team

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Kaplan said he would back a team but it had to be run as a business with formal management procedures, a required counting and betting system, strict training and player approval processes, and careful tracking of all casino play. A couple of the players were initially averse to the idea. They had no interest in having to learn a new playing system, being put through "trial by fire" checkout procedures before being approved to play, being supervised in the casinos, or having to fill out detailed player sheets (such as casino, cash in and cash out totals, time period, betting strategy and limits, and the rest) for every playing session. However, their keen interest in the game coupled with Kaplan's successful track record won out.

The newly capitalised "bank" of the MIT Blackjack Team started on 1 August 1980. The investment stake was \$89,000, with both outside investors and players putting up the capital. Ten players, including Kaplan, Massar, Jonathan, Goose, and 'Big Dave' (aka 'coach', to distinguish from the Dave in the first round) played on this bank. Ten weeks later they more than doubled the original stake. Profits per hour played at the tables were \$162.50, statistically equivalent to the projected rate of \$170/hour detailed in the investor offering prospectus. Per the terms of the investment offering, players and investors split the profits with players paid in proportion to their playing hours and computer simulated win rates. Over the ten week period of this first bank, players, mostly undergraduates, earned an average of over \$80/hour while investors achieved an annualized return in excess of 250%.

### Strategy and techniques

[edit]

The team often recruited students through flyers and across the players' friends throughout college campuses across the country. The team tested potential members to find out if they were suitable candidates and, if they were, the team thoroughly trained the new members free. Fully trained players had to pass an intense "trial by fire," consisting of playing through 8 six-deck shoes with almost perfect play, and then undergo further training, supervision, and similar check-outs in actual casino play until they could become full stakes players.

The group combined individual play with a team approach of counters and big players to maximize opportunities and disguise the betting patterns that card counting produces. In a 2002 interview in *Blackjack Forum* magazine,<sup>[1]</sup> **John Chang**, an MIT undergrad who joined the team in late 1980 (and became MIT team co-manager in the mid 1980s and 1990s), reported that, in addition to classic card counting and blackjack team techniques, at various times the group used advanced shuffle and ace tracking techniques. While the MIT team's card counting techniques can give players an overall edge of about 2 percent, some of the MIT team's methods have been established as gaining players an overall edge of about 4 percent.<sup>[*citation needed*]</sup> In his interview, Chang reported that the MIT team had difficulty attaining such edges in actual play, and their overall results had been best with straight card counting.

The MIT Team's approach was originally developed by **Al Francesco**, elected by professional gamblers as one of the original seven inductees into the Blackjack Hall of Fame. Blackjack team play was first written about by **Ken Uston**, an early member of Al Francesco's teams. Uston's book on blackjack team play, *Million Dollar Blackjack*, was published shortly before the founding of the first MIT team. Kaplan enhanced Francesco's team methods and used them for the MIT team. The team concept enabled players and investors to leverage both their time and money, reducing their "risk of ruin" while also making it more difficult for casinos to detect card counting at their tables.

### Team history 1980-1990

[edit]

The MIT Blackjack Team continued to play throughout the 1980s, growing to as many as 35 players in 1984 with a capitalization of as much as \$350,000. Having played and run successful teams since 1977, Kaplan reached a point in late 1984 where he could not show his face in any casino without being followed by the casino personnel in search of his team members. As a consequence he decided to fall back on his growing real estate investment and development company, his "day job" since 1980, and stopped managing the team. He continued for another year or so as an occasional player and investor in the team, now being run by Massar, Chang and Bill Rubin, a player who joined the team in 1984.

The team played on and off the next few years but interest waned as casino conditions, player exhaustion, and weakened management focus caused the group to lose players and finally stop playing.<sup>[*citation needed*]</sup>

The MIT Blackjack Team ran at least 22 partnerships in the time period from late 1979 through 1989. At least 70 people played on the team in

some capacity (either as counters, Big Players, or in various supporting roles) over that time span. Every partnership was profitable during this time period, after paying all expenses as well as the players' and managers' share of the winnings, with returns to investors ranging from 4%/year to over 300%/year.

## Strategic Investments 1992-1993

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In 1992, Bill Kaplan, J.P. Massar, and John Chang decided to capitalize on the opening of [Foxwoods Casino](#) in nearby [Connecticut](#), where they planned to train new players. Acting as the General Partner, they formed a Massachusetts Limited Partnership in June 1992 called Strategic Investments to bankroll the new team. Structured similar to the numerous real estate development limited partnerships that Kaplan had formed, the limited partnership raised a million dollars, significantly more money than any of their previous teams. Coincident with this new funding, the three general partners ramped up their recruitment and training efforts to capitalize on the opportunity.

Over the next two years, the MIT Team grew to nearly 80 players, including groups and players located in Cambridge, New York, New Jersey, Pennsylvania, California, Illinois, and Washington. Sarah McCord, who joined the team in 1983 as an MIT student and later moved to California, was added as a partner soon after SI was formed and became responsible for training and recruitment of West Coast players.

At various times, there were nearly 30 players playing simultaneously at different casinos around the world, including Native American casinos throughout the country, Las Vegas, Atlantic City, Canada, and island locations. Never before had casinos throughout the world seen such an organized and scientific onslaught directed at the game. While the profits rolled in, so did the "heat" from the casinos, and many MIT Team members were identified and barred. These members were replaced by fresh players from MIT, Harvard, and other colleges and companies, and play continued. Eventually, investigators hired by casinos realized that many of those they had banned had addresses in or near Cambridge, and the connection to MIT and a formalized team became clear. The detectives obtained copies of recent MIT yearbooks and added photographs from it to their image database.

With its leading players banned from most casinos and other more lucrative investment opportunities opening up at the end of the recession, Strategic Investments paid out its substantial earnings to players and investors and dissolved its partnership on December 31, 1993.

## 1994 and Forward

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After the dissolution of Strategic Investments, a few of the players took their winnings and split off into two independent groups, the *Amphibians* who were primarily led by [Semyon Dukach](#) and the *Reptiles* who were led by [Mike Aponte](#), Manlio Lopez and Wes Atamian. These teams had various legal structures, and at times million dollar banks and 50+ players. By 2000, however, the 15+ year reign of the MIT Blackjack Teams came to an end as players drifted into other pursuits.

In 1999, a member of the *Amphibians* won at Max Rubin's "3rd Annual Blackjack Ball" competition. The event was featured in an October 1999 article of "Cigar Aficionado" magazine. According to the article, the winner earned the unofficial title "Most Feared Man in the Casino Business".<sup>[2]</sup>

## Casinos' Responses

[edit]

### Legal

*Tsao v. Desert Palace, Inc., No. 09-16233 archived on November 21, 2012*

[edit]

Casinos would often ban card counters from the blackjack table, the casino grounds, or all resort property if they were caught. Catching card counters however was hard for casinos because the best person for reporting card counting was often the dealer and the team is reported to have tipped dealers very well to discourage dealers from notifying casino owners. Some casinos however, purchased lists of pictures of card counters from private companies to be used to identify and ban card counters before they could reach the blackjack tables. Breaking a ban would result in legal prosecution for trespassing. Cities with casinos often placed laws to combat card counting and other methods the MIT blackjack team may have used by banning some methods. Card counting however was not made illegal anywhere.

### Game Changes

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While the rules to blackjack were not significantly changed, casinos began to encourage dealers to shuffle more often to make counting harder. Shuffling though, could not be used in excess because too much of it bored non-card-counting gamblers and kept the casino from earning money because any time spent in which people were not betting was a waste for the casino. Switching between multiple decks to allow faster changing was an easy alternative to shuffling but was still not effective enough. Electronic blackjack is becoming increasingly common but is not seen by many to be a sufficient replacement for regular blackjack.

## In the media

[edit]

### Books

[edit]

- A variety of stories about a few of the players from the MIT Blackjack Team formed the basis of *The New York Times* Best Seller, *Bringing Down the House* written by [Ben Mezrich](#). While originally marketed as nonfiction, Mezrich later admitted that the characters and stories in the book were mostly fiction and composites of players and stories he heard about third-hand. The private investigation firm referred to as Plymouth in *Bringing Down the House* was [Griffin Investigations](#).<sup>[3]</sup>
- Mezrich wrote a follow-on book, *Busting Vegas*, that took even greater liberty with the actual happenings of the team.
- Jeffrey Ma wrote a book called "The House Advantage Playing the Odds to Win Big in Business" in it he discusses some of the time he spent on the 1994 MIT blackjack team.

### Films

[edit]

- The 2004 film, *The Last Casino*, is loosely based on this premise and features three students and a professor counting cards in Ontario and Quebec.<sup>[4]</sup>

- The 2008 movie, *21*, inspired by *Bringing Down the House* and produced by and starring [Kevin Spacey](#) and [Jim Sturgess](#), was released on March 28, 2008 by [Columbia Pictures](#). [Jeff Ma](#) and [Henry Houh](#), former players on the Team, appear in the movie as [casino dealers](#) and [Bill Kaplan](#) appears in a [cameo](#) in the background of the underground Chinese gambling parlor scene. The movie took significant [artistic license](#) with the history of the team with nearly every story being made up for the movie.

## Television

[edit]

- The "Mysteries at the Museum" series on the [Travel Channel](#) featured the story of the MIT Blackjack Team in the episode titled "Siamese Twins, Assassin Umbrella, Capone's Cell"
- The story of the MIT Blackjack Team, in its incarnation as Strategic Investments, was told in [The History Channel](#) documentary, *Breaking Vegas*, directed by [Bruce David Klein](#).
- The *Bringing Down The House* period was featured on episodes of the [Game Show Network](#) documentary series, *Anything to Win*, and HBO's *Real Sports with Bryant Gumbel* (episode 116).
- The BBC documentary, *Making Millions the Easy Way*, addressed the *Bringing Down the House* period as part of the renowned "Horizon" strand (directed by [Johanna Gibbon](#)), told the story of a Strategic Investments breakaway group, and revealed the science behind the winning formula.
- The TV series, *Numb3rs* had a storyline in which a High School teacher is leading a card counting group in [Atlantic City](#) which launders money through casino winnings.

Season 3 Episode 18, Like a Virgin, makes reference to a team of card counters that acts in a similar fashion to the MIT BlackJack Team

## Other

[edit]

Several members of the two teams have used their expertise to start [public speaking](#) careers as well as businesses teaching others how to count cards. For example:

- [Mike Aponte](#) of the Reptiles co-founded a company with former MIT Blackjack Team member [David Irvine](#) called the Blackjack Institute.
- [Semyon Dukach](#) of the Amphibians founded Blackjack Science.

## References

[edit]

- ↑ [Blackjack Forum interview with Johnny Chang](#)
- ↑ [The Twenty One Club: The annual blackjack ball hosts Gambling's Most Furtive \(and Quirky\) Fraternity](#)cigaraficionado.com, Sept/Oct 1999
- ↑ Ian Kaplan (March 2004). "review of *Bringing Down the House*" ↗
- ↑ *The Last Casino* at the Internet Movie Database. Retrieved on 2009-11-03.

## External links

[edit]

- "Inc. Magazine: Business Lessons from the Blackjack King" ↗
- "Newton Man, Bill Kaplan, Provides Inspiration for Kevin Spacey's Character in 21" ↗
- Citynet Magazine article on the team and card counting ↗
- "Chet Curtis Report on NECN: Interview with Bill Kaplan" - video ↗
- "Mike Aponte Talks 21" Raw Vegas - video ↗
- "Math Whiz Breaks The Blackjack Bank" Fox News DC - video ↗
- "Interview with MIT Mike" BlackjackInfo.com ↗
- "The MIT Team's \$500,000 Weekend" Midwest Gaming and Travel ↗
- Wired Magazine: Hacking Las Vegas ↗
- BBC documentary about card counting and the Team ↗
- USA Today Q&A with Bill Kaplan (with photo) ↗
- MIT Blackjack Team ↗

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