

US lotteries and Daily Fantasy Sports

Daily Fantasy Sports (DFS) is an American-made phenomenon that combines the passions that surround sport-as-spectacle, the pride that comes from making astute choices, and the opportunity to stake and win or lose money. Compared to betting on real sports contests, it minimizes the possibility of rewarding match-fixing. Its sudden emergence in the USA has drawn the attention of state lottery operators.

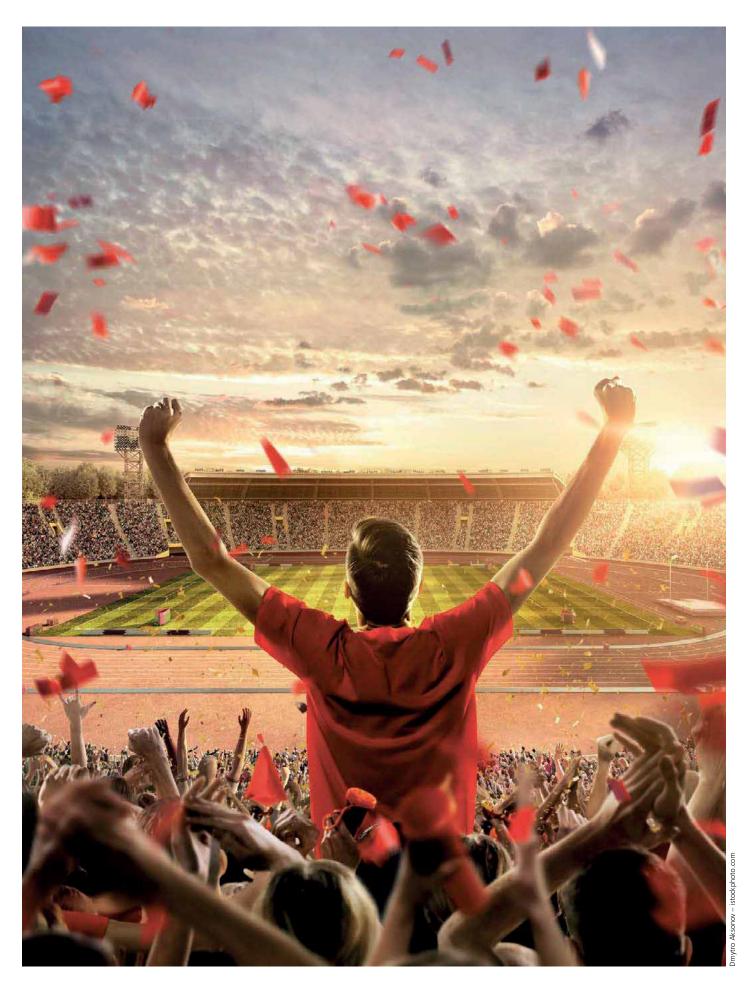
Many people love spectator sports, some people love gambling, and among those who care for both, betting on sports is natural. In the United States, gambling is forbidden except where expressly allowed. As a catchphrase, "Gambling is officially deplored in many places where sports teams are adored." The potential contamination of the sports-as-entertainment industry by gambling is a risk that has been guarded against by multiple layers of laws, both at the Federal level and at the level

of the individual states. Only recently has the American Gaming Association, a group representing mostly casino interests, proposed relaxing laws at the Federal level in a way that could eventually lead individual states to set their own standards for betting on sports.

Fantasy Sports: Real players, imaginary teams

In the meantime, though, people with enthusiasm for spectator sports have invented

ways to stake money on sports action, without creating a risk of match-fixing or other forms of corruption. Rather than betting on the results to be achieved by a real team, they create 'Fantasy' teams whose performance depends on the reported individual performance of real players. Each person playing in a 'Fantasy League' is in effect the manager of a team of individual real players, each of whom may make a statistical contribution to the success of the imaginary team.



Each real player comes at a cost, and it is the manager's job to put together the bestperforming team within cost constraints. The cost constraints, and the ways in which individual metrics contribute to team success, are defined by the rules of the particular fantasy league.

Fantasy sports depend on tracking the performance metrics or statistics of individual players, in team sports.

Readers familiar with American base-ball know that players in this particular sport have long been known by their performance statistics. University academics and journalists who were baseball fans were among the early practitioners and proponents of what has come to

be known as Fantasy Baseball. Managers of Fantasy Baseball teams were naturally inclined to compete among themselves, and friendly bets were a part of the competition from early on.

When a players' strike disrupted the 1981 Major League Baseball season, sports journalists needed something to write about, and some wrote about Fantasy Baseball. An audience that was prepared to read about real baseball, but unable to find that, was open to this substitute. This was the start of huge growth in popularity of fantasy leagues. Eventually all the major televised sports in the US - including football (both American and international), basketball, golf, ice hockey and auto racing - developed corresponding fantasy leagues. Most recently, fantasy sports have been taken up by some of the major non-US sports, such as cricket's IPL (Indian Premier League).

Fantasy sports gained popularity in the US due to a number of factors, not least because they provided an opportunity for people to bet on the performance of athletes they cared about. The "ownership" felt by the fantasy sports player toward their team was a point of pride traditionally backed up

by an entry fee into a fantasy league tournament. The tournament took place in the same time-span as the real athletes' competitive season, with incremental progress toward the final outcome, in the form of statistics, forthcoming each day or at least each week.



Scoring on a DraftKings football match. Points are awarded for goals, assists, shots on target and so forth for the field players, while the goalkeeper is awarded points for saves, clean sheets. and wins.

Synergy with the entertainment industry

Fantasy sports stoked a hunger for 'data and analysis' of sporting events, which entertainment providers in the developing Internet economy moved to supply. Maintaining individual performance statistics was a service that networks employing sports analysts, commentators, and so on could provide. Having statistics to talk about was a particular boon for television commentators in US football. The broadcast of a typical professional football game lasts over three hours, during which the play clock runs out 60 minutes, and the football is actually in play less than 15 minutes (most of the time during the broadcast is devoted to advertising). Discussing the shifting fortunes of the players as revealed in their statistics is a prominent part of the conversation when the ball is not moving.

Fantasy sports, and betting on their outcomes, got support from the professional sports leagues when it emerged that people who play fantasy sports spend more time watching televised sports than other fans. To the degree that fantasy drives engagement with real sports, it also drives exposure to the advertisements that accompany the

sports broadcasts and that are a principal revenue source for the television networks, and indirectly for the professional sports leagues that provide the entertainment.

The development of mass popular use of the Internet for commerce in the US

posed a large problem for those who were concerned with regulating gambling. Within the United States, many issues are left up to regulation by the individual states; gambling is one of these. Federal law generally aims to support states' rights of determination by forbidding state transactions of certain kinds. Even the interstate transport of lottery tickets, legally sold by individual states, is still technically illegal in the US. The

rise of interstate commerce on the Internet was seen as undermining the ability of the states to regulate gambling (and other vices) within their own borders. This led to enactment of Federal legislation (the Unlawful Internet Gaming Enforcement Act of 2006, or UIGEA) that put on financial institutions a burden of assuring that their transactions were not in support of the forbidden commerce of gambling. This was recognized as a significant imposition on the financial institutions, and in order to avoid burdening them with trivial matters, the UIGEA specifically exempted betting on Fantasy Sports from its scope. The aim of exempting Fantasy Sports was simply to lighten the burden on the banks by allowing them to ignore these transactions, large in volume and low in impact.

This exemption was widely, if incorrectly, construed as meaning that betting on Fantasy Sports was legal, or was not gambling. In fact the UIGEA did not attempt to define what was gambling, or what was legal gambling. That determination was left up to the individual states. The Federal law was meant to ensure that states could regulate effectively within their borders, by suppressing inter-state transfers of funds that might

subvert the laws of a particular state. In a like manner, an older Federal law, the Wire Act of 1961, had suppressed the practice of using telecommunications to negotiate wagers across state lines.

The Daily Fantasy Sports innovation

The perception that the UIGEA seemed to recognize fantasy sports tournaments, in which people pay to play and receive monetary prizes, as something different from forbidden gambling, played a critical role in the development of DFS. If betting on an aggregate of statistics over a season was allowed, why should betting on an aggregation over a day be different? Why not speed up the action by one hundredfold?

The organization of betting on outcomes that could be determined every single day was done in a calculated way, by entrepreneurs backed by big investors, with the intent to become the "houses" that could make money both by taking a "rake" of the money staked, and by selling advertising on their sites. The statistical traffic already existed. All the purveyors of DFS needed to do was organize the betting opportunity.

Two major purveyors of DFS, Draft Kings and FanDuel, raised the profile of DFS in 2015-2016 by advertising their offers very heavily during major sporting events. Individual states began to consider whether DFS could be legal under their current regulations. The issue gained some urgency when it was revealed that employees at one or more of these purveyors had won large sums of money by trading on "inside information". At the time of writing, some states have declared DFS illegal, some have declared it legal, and many are considering legislation that would clarify the status of the activity and tax it for the benefit of the state. Managers of state lotteries tended to regard DFS as a threat (or an opportunity, if they could be brought under control of the lottery). However, in no case has DFS yet come under the control of a state lottery.

Why is DFS potentially a threat to lotteries?

Emotional engagement

Outcomes determined from daily statistics can be highly volatile, and chance seems to play a large role, which makes the activity more like gambling on a lottery. Yet enthusiasts feel some ownership of their "teams", in a way that few lottery players feel ownership of their lottery plays.

In fact, the availability of a convenient daily gambling alternative where gamblers can feel real ownership of their wagers exposes multiple weaknesses of traditional lottery games. Many lottery games are played in a passive way – even though players may "pick" numbers, in fact most let a random number generator make the selection. Some few players may feel an emotional attachment to a set of numbers, but this is nothing

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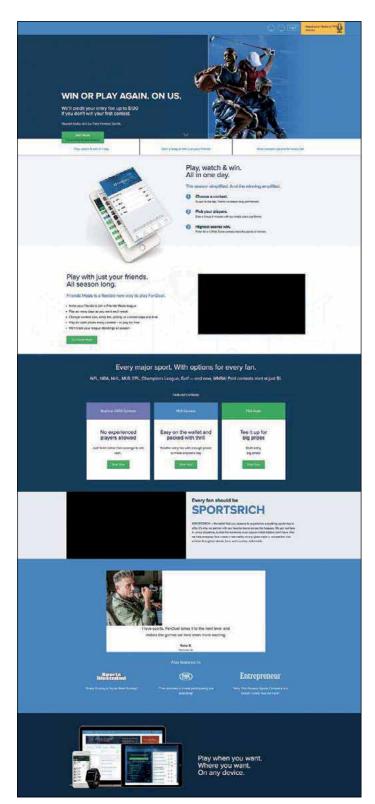
like the connection they feel to athletes they have seen performing.

In contrast the active agency of the DFS player choosing their team, and the ongoing "management" of that team, represents a powerful engagement.

Scope for skill

In many states, the determination whether DFS is gambling depends largely on whether it is viewed as a game of skill. Alternatively, it may be judged a game of chance, and consequently to be regulated as gambling. Accumulated evidence sug-

gests that it is possible to play DFS skillfully, even or especially if many players do not play with skill. The skills involved have to do with data analysis as well as with sport. Unlike the processes that determine lottery winners, the processes that determine DFS outcomes are not random and independent





Landing pages for the Fan Duel (left) and Draft Kings (right) DFS websites.

from day to day. Although lottery players may take pride in skillful performance, their skill is in fact illusory. Winning the lottery is truly an "equal opportunity" proposition.

Recruitment

The possibility of skilled performance tends to put beginning DFS players at a disadvantage. The purveyors of DFS have recognized that putting beginners at a great disadvantage may work against recruiting more people to play. Consequently, they have created opportunities for beginners to play only against one another. Further, the purveyors recognize that if beginners can be converted to regular players, they will have plenty of opportunity to take profit by "raking the stakes". Consequently, they dedicate nearly all the stakes in beginnersonly contests to paying prizes. For example, all beginners may stake USD 2 to enter the contest, and at the end those in the upper half of the results distribution may win USD 3.60. This produces lots of happy players, some of whom may wish to play for bigger prizes. To do so, they must graduate to another level of contest, where the house pays fewer, bigger prizes and also takes part of the stakes. All this is feasible for DFS because the players are individually identified, and a play history can be attached to each individual.

In contrast, US lottery customers are usually anonymous to the lottery, and beginners are almost always so. The games that beginners play typically are those that have the highest profit margin for the lottery - big jackpot games, and instant tickets costing only a few dollars. These games provide the least winning experience for the player of any lottery games. Rather than creating a 'funnel' that takes no profit at the start of a player's lifetime as in DFS, the lottery takes profit maximally at the start. Players who nonetheless continue to play may encounter gentler conditions as they mature, and move much of their spending to the higher-priced instant tickets that return more money to the players.

Given the potentially high level of engagement of DFS players, the instrumentality of televised sports in keeping them engaged, and the ability of DFS to take little or no profit from developing players, it is easy to see that state lottery managers may face a real threat from DFS. DFS can even provide an alternate source of revenue to the state, if the state chooses to legalize and tax the activity.

Current outlook

At the Public Gaming Research Institute (PGRI) meeting held in New York City in April 2016, leaders of US lotteries discussed DFS at length. However when many of the same leaders met at the same venue in

March 2017, they reflected on how much less DFS was on their minds than it was just one year ago. This is partly because they (and everyone in US sports) now face a much bigger threat or opportunity, in the coordinated political effort to legalize gambling on real sports in the USA. Further, the process of judging or establishing the legality of DFS in many states is ongoing, and this is the work of state legislatures, not state lotteries.

The DFS phenomenon is less compelling also because the tactics used by Draft Kings and Fan Duel depleted their funding and eroded public trust in their integrity. Both purveyors spent massively and unsustainably on television advertising in 2016. The "insider trading" scheme exploiting honest players for the benefit of employees of these houses was exposed in 2016. The two firms announced their intention to merge, late in 2016.

Despite the retreat of DFS as an imminent threat, the comparative weakness of lotteries in player engagement and new-player development has now come into focus. These are precisely the strengths of sports betting, whether fantasy or real. The US lotteries look forward to the opportunity to harness player engagement with sports to expose them to more traditional lottery offerings, much as European and Canadian lotteries have learned to do.

How to play Daily Fantasy Football!

DFS as a concept is largely unknown to European audiences. We illustrate how DFS is played using a sport well known in Europe, namely football.

DFS couples fantasy league organizers with fantasy sports players.

The fantasy league organizer keeps publicly-known performance statistics for the players who play in professional games.

These statistics include counts of goals, assists, shots, shots on target, crosses, interceptions, tackles, and fouls drawn for the field players. Goalkeeper statistics include counts of saves, "clean sheets" or games with no score by the opposing team, and wins. Against these positive statistics fouls, yellow cards, and red cards

count in a negative way. Goalkeepers' performance statistics are decremented by goals allowed.

The league organizer also determines, in an agreed-upon way that depends on these same statistics, the "cost", in fantasy dollars, of each real player.

The fantasy sports player selects, for one contest, 11 players from at least three separate real-life teams. The team must be assembled with a set limit on cost, and must include one goalkeeper, three defenders, three midfielders, two forwards and two "utility" players, who may normally play in any of the field positions.

The fantasy player pays an entry fee to field this team against others in the con-

test, which is defined over a set period of time – perhaps one day.

The performance of each real player in a single real match during this period of time generates the statistics named above. The aggregate of all the statistics for the 11 players on a fantasy team determines that team's score. The highest-scoring fantasy team wins the fantasy contest. Typically, the entry fees are divided to pay the highest scorer a significant prize. Multiple winning tiers may be defined, and the operator of the infrastructure typically takes a "rake" of all the entry fees.

Each new day brings the opportunity to adjust the makeup of the team and enter another contest.