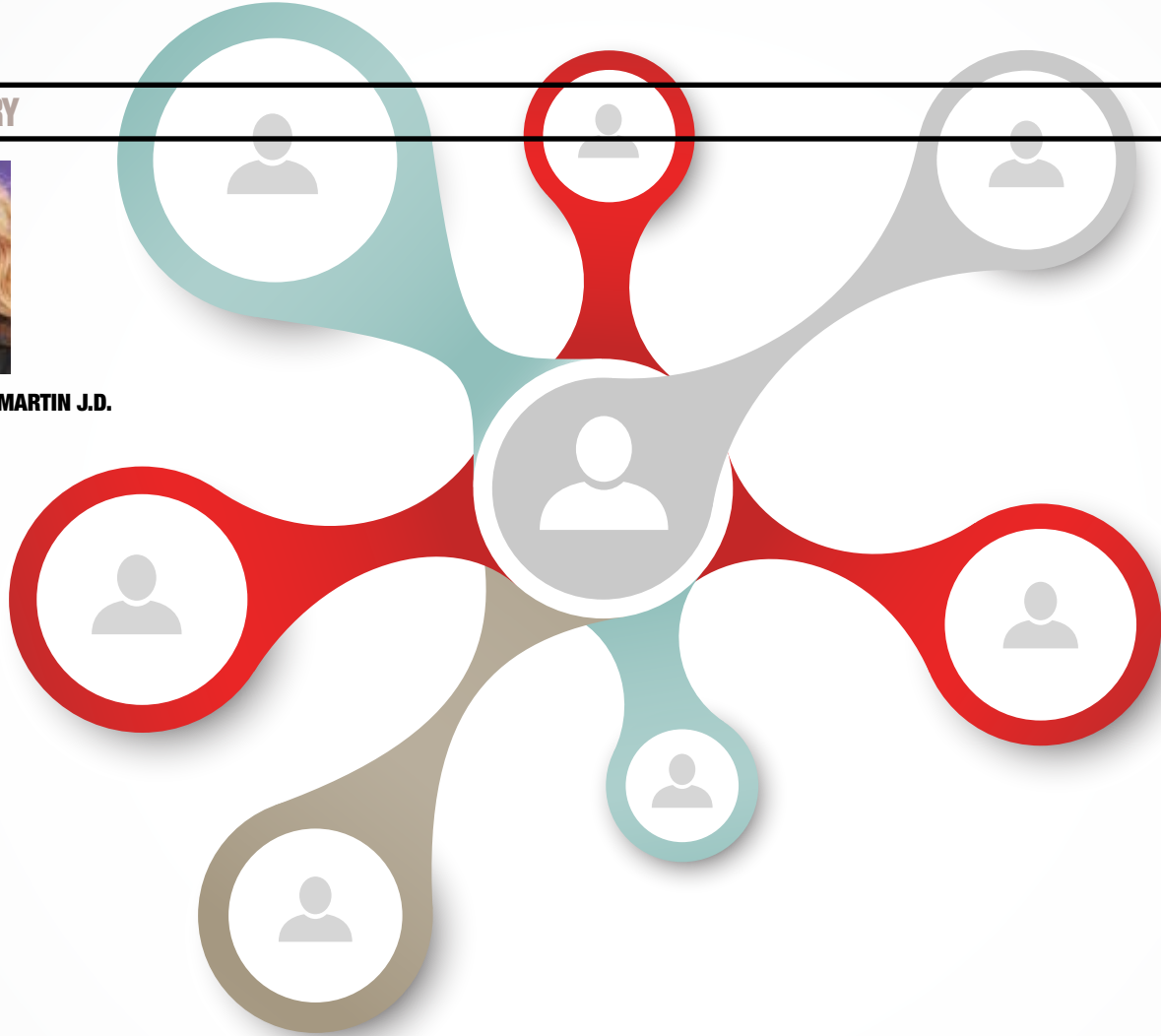




BY CHRISTINE MARTIN J.D.



## Big Data and Social Casino Gaming

*Many people fear that big data will lead to increased privacy invasion. Those same people were alarmed by the news that the NSA is collecting private citizen data. For most of us there is an unspoken trade-off or exchange of privacy for greater access to information, wider/faster communication and the general benefits of digital connectedness. By now we have accepted the fact that market research firms are gathering massive amounts of consumer data about our online activities.*

Land-based casinos have long been tracking various customer experiences, including spending behaviors, slot activity, and even dining habits. This data is being used to provide better customer service and promote offers that keep good customers coming back, as well as provide recovery offers to dissatisfied customers who may have

suffered big gambling losses. According to Yahoo finance, Caesars' (the largest gaming company in the world) has more than 200 data scientists on staff.<sup>1</sup>

Online gambling is a diverse area including sports betting games, poker, slots, bingo, lottery, and other games. Regular online games largely use virtual money; however social casino

games use real money. According to SuperData.com, there are an estimated 173 million people playing social casino games worldwide. Morgan Stanley reports that social gambling is a \$1.7 billion industry within the \$391 billion global gambling industry<sup>2</sup> estimating that social gambling could grow up to \$7 billion by 2015. Morgan

*“Demographic and behavioral information are more accessible than ever before via log-in data from social networks and mobile devices.”*

Stanley predicts that online gambling will be worth \$9.3 billion in the US by the year 2020.<sup>3</sup>

Globally, online gambling generates up to \$30 billion. According to one report, the UK and Europe are leading this trend at 54 percent of the market.<sup>4</sup> Social casino has become one of the most profitable gaming genres. As the gaming industry moves in this direction, the role of data scientists becomes increasingly important; the innovation behind big data provides a great deal of information that will help the industry.

#### **SOCIAL NETWORKS & MOBILE IDEAL FOR DATA MINING:**

There are close to seven billion mobile subscriptions worldwide. Facebook has more than one billion active daily users. The switch to social networks and mobile apps for gambling has vastly expanded the ability to access information and opportunities to gather data – providing a wealth of information for stakeholders, game owners, investors, developers, regulators, marketers, advertisers, and sociologists who are interested in studying the field.

Demographic and behavioral information are more accessible than ever before via log-in data from social networks and mobile devices. For example: location, gender, age, race, socio-economic status, friends, likes, dislikes, consumer activity and more. Social game data is being used not only for customer research but also for competitive intelligence. With the recent high profile mergers

and acquisitions, investors can actively research when to buy or sell a company or product.

There is a dizzying display of quantitative data on the economic growth of the social casino markets in Canadian, US, UK and globally. There is no shortage of financial reports of quarterly revenues, projected revenues, market share and profit analysis. Further, the blogosphere and dedicated game and technology news sites<sup>5</sup> are avidly reporting on the sky-rocketing acquisition deals, M&A activity, and new game development as well as the comparisons of market supremacy of mobile vs Facebook. There is a veritable cottage industry of conventions, forums and online gambling community events where the analytics are a central topic of conversation.<sup>6</sup> These events are large and costly and often sponsored by analytic companies promoting their services to game owners and investors.

#### **MOUNTAINS OF DATA, REVENUE PREDICTIONS**

There is a mesmerizing amount of measurement of DAU (daily active users), ARUP (average revenue per user) and LTV (Lifetime Value of players). Stakeholders in this industry (investors, etc.) must digest a plethora of data analytics of the rapidly changing statistics – for example the ARPDau of any particular game.

#### **MOBILE DOMINANCE = DATA EXPLOSION**

In the United States, more states are accepting the presence of real money social casinos. And now that New Jersey

is launching its own mobile casino<sup>7</sup> – these developments will increase the presence of online casinos in the US.

For the first time, the mobile online gambling market is growing faster than Facebook, which has until very recently been the leader in social casino game revenue. Adam Krejcik from Eilers Research has stated mobile is becoming a much more important distribution platform for social casino games. By some reports the mobile gambling market is set to be worth \$100 billion by 2017.

#### **FACEBOOK'S SHARE OF SOCIAL CASINO MARKET:**

Facebook may be losing some ground to mobile but it gains large revenues from social casino games. Most Facebook gaming revenues are generated from social casino games – Facebook reported \$213 million in payment revenue in Q1 2013.<sup>8</sup> More than 250 million people have been playing games on Facebook each month; as of February, 55 percent of the top 400 grossing iOS apps were integrated with Facebook; some 20 percent of all users play games on the social network; and game installs on Facebook have increased 75 percent compared with a year ago.<sup>9</sup> Facebook claims more than 100 developers generated upwards of US \$1 million last year, and more than \$2 billion was paid out to game developers in 2012.<sup>10</sup>

#### **TOP GLOBAL GAMES BY THE NUMBERS**

There are a few games at the top that continue to get the lion's share of the market. The top 10 companies combined accounted for roughly

67% of the market. At the very top is Caesars' recently surpassing Zynga as the Global leader. According to Eilers Research, Caesars' remained the largest social casino publisher with 15% market share. Zynga, formerly the global leader is the still leading on Facebook, with 70% penetration into Facebook gaming system.<sup>11</sup>

Also at the top of the food chain is IGT (International Game Technology) with its high-profile acquisition of DoubleDown Interactive for \$500 million<sup>12</sup> ensuring IGT/DoubleDown an impressive 14% market share.<sup>13</sup> "Big Fish Casino" is the largest stand-alone social casino app on mobile and will generate an estimated \$120m revenue in 2013. Three big UK game companies include, bwin.party with reported earnings of €145.7m<sup>14</sup>, 888 (a poker site popular in the US and UK) earning \$94 million revenue in Q3 of 2013<sup>15</sup> and PaddyPower, a popular social sports betting site, saw profits rise with mobile applications to €379.8 million.<sup>16</sup>

### GAME ANALYTICS IS BIG BUSINESS

Budgets for data and marketing analytics are increasing; in 2012, it was \$4.3 billion according to the CMO survey. Today, the majority of marketing and design budgets are going to analytics.<sup>17</sup> These analytics are so sought after that the firms can command big fees for their monthly and annual reports. SuperData Research is a leading provider of consumer insights for the digital games market. SuperData produces a monthly Social Casino Games Market report – available for \$999. Their annual US social casino survey is also not cheap at \$3,000.<sup>18</sup>

There is a no shortage of analytic companies serving this market. To name a few: Kognito, Kontagent, Playmetrix, Karmasphere, Flurry, Mixpanel, Totango, Claritics, Games Analytics (UK), and Vertica (UK).

### DATA QUANTIFICATION FOR GAME MONETIZATION

It is notable to mention King company's game Candy Crush, a very popular game with women.<sup>19</sup> Candy Crush is played on Facebook and through iOS mobile apps with an impressive daily revenue of \$884,004.<sup>20</sup> According to AppData, a leading expert in application metrics for Facebook, iOS, and Google Play apps.<sup>21</sup> On Facebook Candy Crush has a staggering 50 million daily active users (DAU) and 100 million monthly active users (MAU).

Other impressive numbers of users of the top social gambling apps are:

#### Zynga Poker

6 million DAU      23 million MAU

#### Slotmania

1.8 million DAU      4 million MAU

#### Double Down Casino

1.7 million DAU      7 million MAU

#### Bingo Bash

0.7 million DAU      3 million MAU

### KEY METRICS FOR RETENTION, ENGAGEMENT AND MONETIZATION

Advanced analytics are providing rich player insight, demographic and behavioral trends for design, and monetization opportunities for game designers/developers. The promise of predictive analytics and real-time analytics are irresistible to anyone who has a stake in this market.

Access to the valuable log-in information from social networks and mobile data provides important information. Game developers can study this data to improve future designs. Designers and developers can create segmentation campaigns to engage new players and create new revenue streams.

Possible study areas from game metrics:

- New game designs specifically for women.
- New games designs for specific

country and/or region.

- Monetization strategies – encourage more people to switch to real money activity.
- Study when and why do players spend money on games.
- Test advertising strategies.
- Track conversion rates from non-paying to pay-to-play gamblers.
- What triggers to pay-to-play conversion decisions?
- When does someone purchase virtual goods?
- What ads work best in the social casino space?
- Who are the whales (big spenders) and how to keep them?
- When do players like, follow and share game activity with friends?

### THE SOCIAL MEANING OF ONLINE GAMBLING

Why do we play games? What meaning can we derive from studying this data? How will it help society? The utopian promise of big data is to learn more about human behavior, improve channels of communication, provide life enriching entertainment, and increase the feelings of connectedness.

### GAMES AND SOCIALLY-POSITIVE ACTIVITY

Much has been said about video games and violence; however, more recently, social researchers have begun to report on the positive cognitive effect of video games. Video games have been proven to help rehabilitate stroke victims and assist them gaining back motor skills.<sup>22</sup> New research also suggests that older adults who play video games are happier.<sup>23</sup>

Analytics are good public relations for the gambling industry, promoting gambling as mass entertainment. Popularity on social networks and via mobile indicates a new mass market appeal, helping to mitigate negative stereotypes or stigma that gambling may have drawn in the past.

Players can share winnings, give gifts, and follow other players in ways that were not practical with land-

based casinos. These positive social aspects may help curb the threat of negative effects (excesses/addiction/abuse.) Developers could learn ways to make social casino games even more socially positive, build stronger communities, strengthen friendship networks and encourage more sharing of our digital lives.

The following are some of the potential positive social effects of playing games (including digital games and social casino games); social interaction, alleviate loneliness and boredom, encourage relaxation and stress relief, promote improved cognitive activity such as memory, reaction time, provide emotional connection; joy, excitement, humor, anticipation, alleviate anxiety, sponsor pride and personal satisfaction.

#### BEHAVIORAL TRACKING:

By tracking game playing behaviors we can learn about how players across the globe play differently. Recent changes in the profile of social and casino game players include more women and other important changing demographics such as age and location.

#### MEASUREMENT POTENTIAL

- How do men and women play online games differently?
- Do men and women have different design preferences?
- How do women spend and pay differently than men?
- How does age make a difference in play behaviors, betting styles, game preferences?
- Do younger players engage differently than older players?
- How do players differ in Canada, the US, UK, Europe and Asia?
- Tracking financial data: different payment habits, from PayPal, debit cards, checking account, gift cards, etc.
- Play habits: when and how long: length of session?
- Social behavior: sharing habits, communication habits, gifts, voluntary game promotion.
- When and why do players purchase virtual goods?
- Advertising consumption: targeted ads, effectiveness of ads in game space?

#### CONCLUSION: BIG DATA ENCOURAGES SELF-REGULATION

With the shift to real money games online, there are worldwide threats

of government imposed regulatory action, including possible legal limits and taxation.

The study of Big Data can help game companies find acceptable/responsible ways to self-regulate (for example set goals/limits to protect vulnerable players) before government regulators impose from the outside. Data analytics can allow companies to track spending/betting habits, and potentially provide warnings to minors and other vulnerable populations. Other voluntary regulation may include putting age limits on certain games. The SGA is a social gaming association which encourages socially responsible standards and educates detractors and policy makers concerned about social gaming.<sup>24</sup>

Gambling is as old as the Bible and digital games are here to stay, advanced data analytics are the best way for us to understand player behaviors and give us important insight into the future trends of the social casino industry. **CGL**

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