MASTER THESIS

An Analysis of the Online Dating Industry and How Startups Can Compete

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ABSTRACT

Many new dating sites are started each year but few become a success. This paper provides an analysis, evaluation and recommendations for startups seeking to enter and compete the online dating industry.

Methods of analysis include an industry analysis of the general online dating industry, further investigation of 35 of the major dating sites as well as five in-depth case studies. The cases studied were Match, PlentyofFish, Ashley Madison, Tinder and the Dating Ring. A ranking of the most popular dating sites is found in the appendix.

We found that each dating site had individual and unique concepts as well as a particular market focus. This led us to identify that each site could be placed in a quadrant within a framework we developed. The X-axis is the market focus: (X1) Mainstream or (X2) Niche and the Y-axis is the concept differentiation (Y1) Generic or (Y2) Unique.

While individual dating sites had different strategies for creating their user base as well as maintaining it, certain properties would match each other in relation to the sites in their quadrant. Reputation was found to be extremely important and word of mouth, both positive and negative, helped each of the cases studied grow. The biggest differentiator in their strategy was the time in which they launched.

The paper discovered several similarities of successful startups. Most notably the most recent launched had a new strategy to deal with creating and maintaining their users. They also focused on unique concepts as well as a niche market focus. Finally, their choice of revenue model was for most part heavily in favor of freemium with the exception of the few sites who chose a full subscription model by manipulating the network intensity and appealing to a wealthy segment.

In the last part of the paper we make recommendations for startups that increase the chance of success: (1) Keep an eye out for market vulnerabilities and take advantage of them, (2) consider designing the concept to decrease the network intensity so the size of the user base is less problematic, (3) by focusing on a niche, a startup can create a submarket and deliver higher value to that specific target group, (4) innovate on the core concept of dating to differentiate from existing sites and gain high word of mouth engagement, (5) screen or verify new members and prevent spamming, (6) focus on nurturing trust and credibility by following the eight drivers of trust and (7) attract customers by offering free initial access and introduce freemium inspired revenue models after reaching critical mass.

By following the seven recommendations, startups increase their chances to successfully enter and compete in the online dating industry.

1   Introduction

This paper explores the development within the online dating industry throughout the last decades. It further identifies the attractiveness of the global market and discovers strategies for startups to compete and succeed in the changing online dating market.

The Internet has transformed many business models and human activities. Dating is not an exception. Not only have a myriad of online dating sites emerged, but the communication and information gathering have moved online. People that have grown up with the Internet might wonder how it was possible to meet anyone before.

Dating is a market where people are looking for the best possible partner. The most important impact of the transformation to online dating was the decrease in transaction cost. Finding a partner before the Internet was expensive and the market was inefficient. There could be people searching for partners, but it was difficult to find one. With online dating platforms, it is easy to find a potential partner, who might also be interested in you.

1.1   Online dating

Consumers are exposed to commercials for online dating all the time. Both from television commercials, online banners, Google ads and Facebook ads. The industry is filled with online dating platforms, each competing intensively to attract customers. Many dating platforms have very little differentiation. Some focus on very specific customers like religious dating, senior dating or even dating for having an affair. Others focus on a unique concept, where the people are matched in unique ways. The Dating Ring has differentiated their concept from traditional online dating sites by using matchmakers and not allowing people to search the database. Tinder was one of the first to go mobile-only and implemented a new way of matching members.

The industry is lucrative and is growing each year. The IBIS World report on the dating service industry report a $2.0 billion dollars in revenue gains in the US in 2013 and an annually growth at about 5 per cent (IBIS World, 2014). Most of the revenue comes from the Online dating industry. Interestingly, the revenue gains for the whole industry are increasing, while the revenue from subscription based revenue models is decreasing.

While the industry is lucrative, the competition is strong. There are many competing platforms in the market and new ones launch every year. The industry is highly concentrated with a handful of large dating platforms controlling the majority of the market. IAC, the largest player in the dating industry, bought Match and several other key competitors.

1.2 Startup challenges

Entrepreneurs are launching new dating sites every year. It is relatively easy and cheap to start an online dating site on the technical level. There even exist software that the entrepreneur can buy and customize.

Competing against the big well-establish online dating sites is where almost every start-up give up. No user want to join a dating platform without users and if they do, they are not willing to pay for it. The few that do attract a user base is most often bought by IAC or are not able to monetize its users.

These challenges are not unique for the online dating market. It is the same challenges startups face in many other online markets. Facebook is very strong in online social network sites, Google in search, eBay in online auctions and TripAdvisor in online reviews. All these markets have huge potential, but seems to be very difficult to compete in for entrepreneurs.

Figure 1 illustrates the combination of the two research areas. The paper focuses on the online dating industry as shortly introduced in section 1.1 and combines it with the challenges of startups in answering the research question asked in the next section.
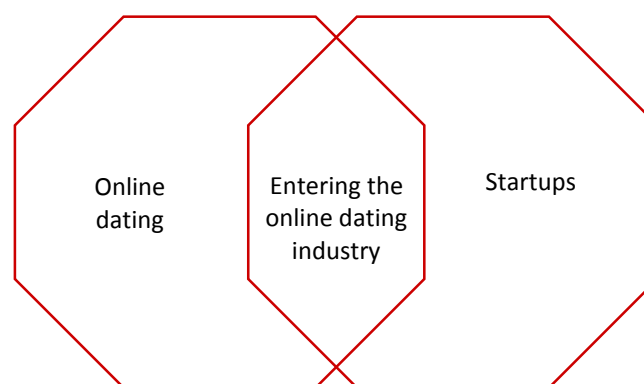
Figure 1 – Research areas

1.3 Research Question

The paper investigates how entrepreneurs can successfully enter the online dating industry. This is achieved by looking at both academic findings and practical insights on how existing firms has succeeded in the past.

The research question is formulated as:

How can startups enter and compete with established companies in the online dating industry?

1.4 Thesis structure

Figure 2 shows the general structure and outline of the paper. The next chapter explains the research strategy and research methods. Relevant literature is reviewed in Chapter 3. Chapter 4 is an industry analysis, where we also develop a classification framework. This is followed by case studies of five dating sites in chapter 5. The findings are discussed and compared to theory in chapter 6, while we formulate recommendations for startups in chapter 7. Finally, chapter 8 concludes the paper.

CHAPTER 1	> A short introduction to the dating market, startup challenges and presentation of the research question.
CHAPTER 2	> A description of the research method and research strategy pursued to examine the research question.
CHAPTER 3	> A literature review of selected research areas relevant for examining the research question.
CHAPTER 4	> An industry analysis and creation of a classification framework of online dating sites.
CHAPTER 5	> Case studies of five selected online dating sites.
CHAPTER 6	> Discussion based on findings from case studies and literature review.
CHAPTER 7	> Recommendations for startups.
CHAPTER 8	> Final conclusion.

Figure 2 – General outline of the paper

2 Research method

This section explains how the study was conducted and the underlying research approach. It includes the epistemological basis and the collection and use of empirical data. The section is included to create transparency on the methodological process and why the knowledge produced is appropriate.

2.1 Research approach

The paper takes a critical realism approach to the research question. The critical realist takes a critical stance to how knowledge is produced and rejects the notion of universal knowledge. Just like positivists, it is assumed that there is a real world, but while the positivists are ready to argue proof, the critical realist believe that there is no way such an assumption can ever be proved or disproved: *"we behave as if it were true, as if the world was real"* (Easton, 2010, p. 119). While it is assumed that a real world exist, the mechanisms in this world can never fully be observed in social systems as they can in natural sciences. Therefore, critical realists accept the notion of a socially constructed world creating a tension between two contradictory views. *"Critical realists resolve the tension by arguing that the world is socially constructed but not entirely so. The real world breaks through and sometime destroys the complex stories that we create in order to understand and explain the situations we research"* (Easton, 2010, p. 120).

The mechanisms in the real world produce events that happens independently, whether they are observed or not. If they are observed, they become experiences. It is these experiences that a scientist can find in the empirical data collection. Because of the socially constructed world, issues arise since interpretation is necessary. The issues are even more challenging due to double hermeneutic, where the events are interpreted first by the observer and then by the scientist (Easton, 2010). As a result, explanations are never perfect, but since the critical realist do not believe in universal knowledge, it is more a question about if an explanation is good or not (Easton, 2010).

> *"For CR-guided researchers, the role of a research method is essentially to connect the inner world of ideas to the outer world of observable events as seamlessly as possible"*
> *(Edwards & O'Mahoney, 2014, p. 21).*

2.2   Research design

Figure 3 shows an overview of the content in the research process.
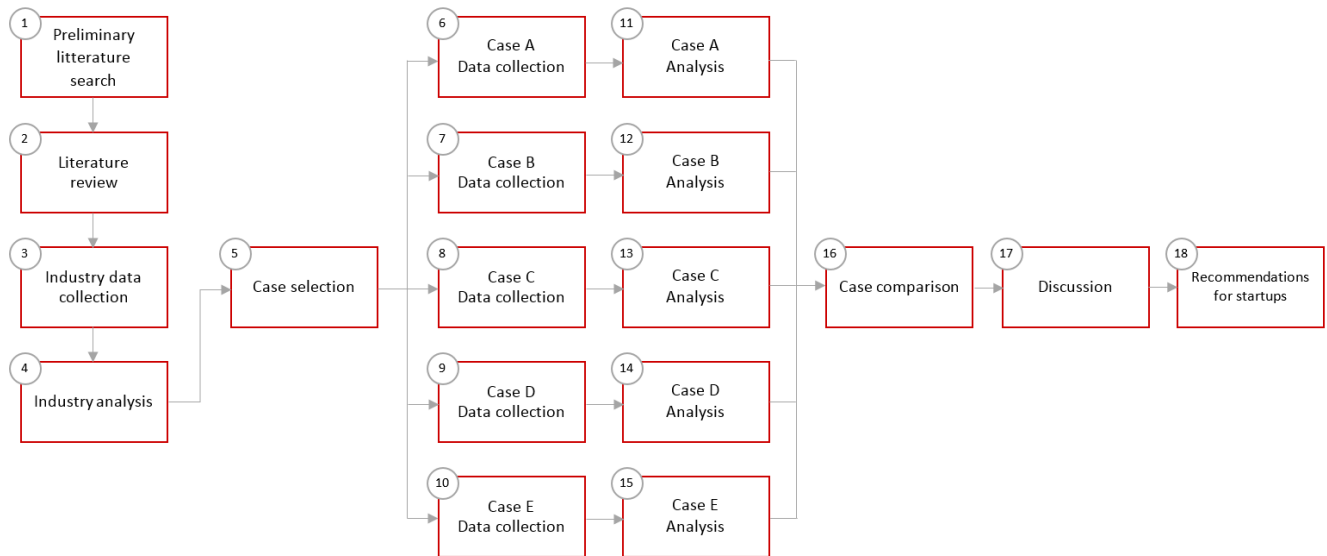
<div align="center">**Figure 3 – Research design**</div>

The study went through different phases. The first phase was exploratory as we asked open questions to gain insights about the topic and industry. An exploratory study is particularly useful to clarify the understanding of a problem, if unsure about the precise nature of the problem (Lewis, Thornhill, & Saunders, 2007). We conducted the exploratory phase through literature search about the topic and preliminary industry information search, which is step 1 on Figure 3. We allowed the exploratory phase to influence the questions asked and we updated the research question several times to accommodate the findings. This is a common approach in critical realism: *"Realist research designs typically start in a more expansive and exploratory phase before targeting what seems to matter most in explaining the specific mechanisms observed"* (Edwards & O'Mahoney, 2014, p. 159).

After the initial exploratory phase, the study was "*descripto-explanatory*" as phase two was descriptive, as a precursor, to the third and last explanatory phase (Lewis et al., 2007, p. 171). The descriptive phase contained a literature review in step 2 and an industry examination that led to a classification framework based on observations and inspired by Porter's generic strategies in step 3 and 4. The industry was analyzed by collecting primarily secondary qualitative data but also

some quantitative secondary data from public available sources including industry analysis reports, news articles, blogs posts and both press releases and financial statements from key companies in the industry.

The third phase was explanatory, searching for explanations for why the industry is organized as it is. In order to achieve this, we selected five cases in step 5 on basis of the knowledge gained from the first two phases. The data was acquired from public available sources. Primarily qualitative data from the dating companies' websites, press releases, financial statements, TV or newspaper interviews, and blog posts. The case studies was conducted in step 6-15, was compared in step 16 and discussed in relation to the theories in step 17, which resulted in recommendations for startups in step 18.

The explanatory study makes a good fit for the case study approach adopted as explained in section 2.5 and a good fit for the critical realism paradigm. As stated by Easton, *"an important aspect of mechanisms in the critical realist tradition is that they offer a rich source of explanatory devices"* (Easton, 2010, p. 122).

While the three phases and the 18 stages indicate a linear approach, this is not the case. The phases and the stages described and shown in Figure 3 are a simplified outline of the overall process. It would be accurate to add arrows backwards both to last stage, but in some cases also back to earlier stages. That would however not provide a meaningful overview.

2.3   Literature review

The theoretical understanding is based on a literature review. In critical realism, *"the researcher basically seeks to provide a theoretical explanation for the social world and accepts that some views of the world are more accurate than others"* (Edwards & O'Mahoney, 2014, p. 13). This makes it important for the researchers to be critical and careful in the selection and usage of existing theories. Additionally, we had to take into consideration the limited research in the field. While both the dating industry and startups have been researched substantially in isolation or in other contexts, this is not the case for startups in the online dating industry. In situations of under-researched domain areas, *"researchers can often get a head start by reviewing literature by discovering the ideas and theories that already exist and then critique, or attempt to improve them"* (Edwards & O'Mahoney, 2014, p. 13).

We elected an iterative approach to the literature review. While we identified and reviewed literature, new relevant or better-fit theories emerged. The literature review resulted in a theoretical framework that is domain-specific and used as a basis for studying the cases.

2.4 Data collection and data analysis

After the literature review, we had gained an idea of the mechanisms present in the online dating industry as well as theoretical knowledge of the field. The data collection was based on secondary public available data. Every effort was made to include everything that we considered important for the research and where possible, confirmed the data from different sources. As Edwards & O'Mahoney stated, *"CR research can and should usually incorporate data of different sorts, quantitative and qualitative, historical and current, anything that the researcher (or their research subjects) have good reason to think makes a difference"* (Edwards & O'Mahoney, 2014, p. 15).

We have used abductive reasoning in the paper. Abduction *"re-describes the observable everyday objects of social science (usually provided by interviewees or observational data) in an abstracted and more general sense in order to describe the sequence of causation that gives rise to observed regularities in the pattern of events"* (Edwards & O'Mahoney, 2014, p. 17). This is achieved by combining observations from the case studies along with the theories identified in the literature review. Based on the combination, we can reach plausible explanations of the mechanisms that caused the events observed in the case studies.

While deductive approaches develop propositions and test them in the real world and inductive approaches generate theory systematically from data, abductive approaches rely on continuous interplay between theory and empirical observations (Dubois, 2002). This paper is in this regard closer to the inductive approach than the deductive approach in that we seek to find new things. However, this should be distinguished from generating new theories as is normal in the inductive approach and can instead be compared with further developing theories to the online dating context.

We have adopted an abductive approach similar to a systematic combining method described by Dubois & Gadde (2002). They found that the abductive approach is well suited for case studies, but needs an integrated approach. The systematic combining method is illustrated in Figure 4. It implies that case study researches should not
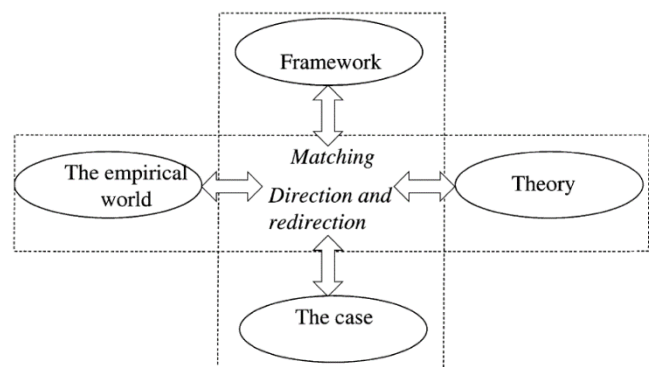
Figure 4 – Systematic combining (Dubois, 2002, p. 555)

follow a linear process, but allow for an iterative process: *"We have found that the researcher, by constantly going 'back and forth' from one type of research activity to another and between empirical observations and theory, is able to expand his understanding of both theory and empirical phenomena"* (Dubois, 2002, p. 555). The theoretical framework consist of preconceptions, that are developed as the research progresses and new things are discovered and interpreted as *"theory cannot be understood without empirical observation and vice versa"* (Dubois, 2002, p. 555). As Figure 4 suggest, the framework, theory, empirical world and the case are getting matched dynamically and are not investigated in vacuum.

2.5 Case studies

Case studies were chosen as the main research strategy. When studying an industry it can be difficult to access the organizations and relationships, which are complex in structure. *"A case study of a single, or a small number, of such entities can provide a great deal of, largely qualitative, data which can be written up as a case study, offering insights into the nature of the phenomena"* (Easton, 2010, p. 118).

We selected multiple cases because of the different approaches adopted by companies. By selecting multiple cases, we can look for replication by choosing cases where a contextual factor is deliberately different. If the predicted variations from the contextual differences anticipated are realized, we have what Yin (2013) define as *"theoretical replication" (p. 57)*. Some cases were also chosen to replicate similar results. This is what Yin (2013) defines as *"literal replication"* (p. 57). The case selection is described in details in the next section.

Additionally, a single case would not let us explore and compare the multiple strategic approaches adopted by different companies. This paper studies five selected cases, which conforms to Eisenhardt's (1989) claim that between four and ten cases usually work well for case studies. The five selected cases were found to be sufficient to cover the important differences in the industry and ensure theoretical and literal replication. Multiple cases allowed us to use a comparative case design and avoid limitations from single-case studies, like difficulties related to replicability and generalizability of the results (Lee, 1989). The relatively few cases fit well with the in-depth qualitative approach selected, as opposite to a quantitative approach where more cases would be necessary to limit the statistical uncertainty.

Given that the nature of the research question relates to "how" and "why", the case study approach is a good fit, since case studies are explanatory: *"This is because such questions deal with operational links needing to be traced over time, rather than mere frequency or incidence"* (Yin, 2013, p. 18).

2.5.1 Selection of cases

The cases were carefully selected after the industry analysis where knowledge about the context was known. At the time of selection of cases, we had identified the key dating sites in the industry and developed a classification framework based on the findings. We discovered that the dating sites could be categorized based on two dimensions. Either they followed a mainstream focus or a niche focus and either the platform was following a traditional online dating concept with no differentiation or they were unique. The two dimensions are explained in section 4.3 and the classification framework is presented in section 4.4.

The cases were selected based on five different criteria. First, at least one case from each of the quadrants in the classification framework to ensure that we had the contextual differences covered and were able to compare the results leading to theoretical replication. Second, the cases included one of each business model: subscription, advertising and transaction. Third, the time of entry into the dating market. Fourth, the cases should have either industry presence, new technology or a unique concept. Fifth, the amount of public available information had an influence. Some cases where rejected on that basis.

The exact reason for each selected case is explained in section 5.1 and section 5.2.

3 Theoretic framework

In this section, the theoretical framework is developed. The framework outlines the case studies and guide the discussion. First, the two-sided market literature is introduced, followed by network effects and switching costs which are closely related. The literature on two-sided markets, network effects and switching costs is important in understanding the nature of online dating competition. Then, the concept of business models and revenue models are reviewed, since that is important for profits and positioning of startups. Finally, reputation is reviewed as the last aspect, because of the importance of the concept in regards of attracting customers, maintaining customers and building trust.

3.1 Two-sided markets

The literature on two-sided markets has mainly been developed in the last ten years (Filistrucchi, Geradin, & Van Damme, 2012). It is however based on principles that have been researched for much longer. Corden (1953), Reddaway (1963) and Rosse (1967) studied the media markets, without the definition of two sided markets. In the last decade, economists have become aware of the fact that other and very different markets share some of the same basic features with the media markets (Filistrucchi et al., 2012).

Baxter (1983) studied the credit card industry and found pioneering results, that later was theoretical and empirical developed (Roson, 2005). In this regard contributions came especially from Katz (2001), Rochet and Tirole (2002), Schmalensee (2002), Wright (2004) and Gans and King (2003). The credit card industry was a popular topic for study, because of antitrust cases against the credit card companies around year 2000 (Roson, 2005). It was found that the credit card industry had special characteristics that made traditional antitrust regulation difficult (Roson, 2005). The two-sided literature was further developed, when researchers began to find similar characteristics in other industries (Roson, 2005).

Identifying a market as a two-sided market has value because the strategies, pricing opportunities and risks differ. In a normal market the price structure and implication is simpler and easier to understand. In most cases, you can analyze the implications of raising or lowering the price or the implications of the competitors' actions. This is much more complex in a two-sided market; because of the influence, one side has on the other and vice versa (Filistrucchi et al., 2012).

Raising the price will under normal circumstances lead to less customers. However raising the price for one side in a two-sided market might not only lead to fewer customers on that side of the market, but also influence the other side (Filistrucchi et al., 2012).

In an online dating platform raising the price for women leads to less women. With fewer women, the value of the service decreases for the men. With a lower value, men might leave the website too even though the price did not change for men. The effect can continue even further, since with fewer men, the value of the service also decreases for women leading to even more women leaving the website and the cycle can continue thereby creating a negative feedback loop. As the example suggest, the implications of price changes in two-sided markets can be difficult to predict.

3.1.1   Definition of two-sided markets

Many different definitions for two-sided markets exists. Evans (2003) defines a two-sided market as a market in which a firm acts as a platform: it sells two different products to two groups of consumers, while recognizing that the demand from one group of consumers depends on the demand from the other group and, possibly, vice versa (Evans, 2003).

As recognized from Evans (2003) definition, a fundamental part of two-sided markets is the platform. With the platform included, a two-sided market has three parts as illustrated at Figure 5.
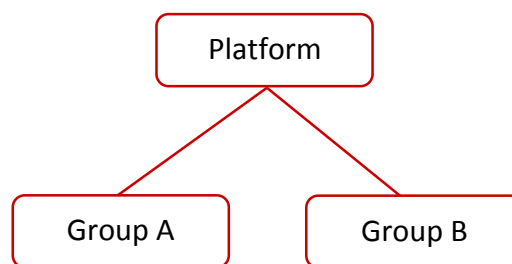

Figure 5 – Two-sided market

The second important part of Evans (2003) definition is that the demand from group A depends on the demand from group B and vice versa, what normally is called cross-side externalities or indirect network effects. A market without cross-side externalities would be a single-sided market with two customer groups (Evans, 2003).

Rochet and Tirole (2006) have contributed to the literature on two-sided markets with research from the credit card industry. Weyl (2006) developed on their work and defines two-sided market as a market that meet three criteria (p. 4):

1. *"There are two distinct groups of consumers served by the market".*
2. *"Some part of the value from the service to consumers comes from its capacity to connect the two sides of the market".*
3. *"The individual prices charged to each side of the market, and not just the sum of those prices, matter in determining the usage of the service and consumer welfare".*

Online dating fulfills the three criteria. There are two groups of consumers, normally referred to as men and women or simply as matchseeker A and matchseeker B. The value of dating platforms is closely related to the capacity to connect the two sides in a matchmaking process. The usage is influenced not just by the sum of the prices, but also the individual prices. However, in most cases law and ethics discourage price discrimination based on gender.

Rochet & Tirole (2003) state that companies operating in a two-sided market are choosing a price structure for their service rather than a price. The price level is defined as the total price charged by the platform to the two sides, while the price structure refer to the allocation of the total price between the buyer and the seller (Rochet & Tirole, 2003). Instead of profit maximizing on all customers, many companies in two-sided markets are treating one side as a profit center and the other as a loss leader (Rochet & Tirole, 2003). When a company adopts a strategy where they are offering the service cheaper to one side of the market (than it would have in a normal one-sided market) compared to the other side, we say that they have subsidized one side to profit from the other (Rochet & Tirole, 2003).

In terms of reaching critical mass in competitive markets such as social networks *"the conventional wisdom holds in that once a given firm establishes a critical mass of adopters, the market tends to tip in favor of that firm"* (McIntyre & Chintakananda, 2014, p. 118).

3.2 Network effects

Network effects are closely related to two-sided markets as mentioned earlier. In the following, the concept of network effects is reviewed in more detail.

3.2.1 Direct network effects

Consumers value a product more, if other similar consumers use the product as well. Shapiro and Varian (1998) classify this as direct network effects. Direct network effects often arise because it is easier to communicate and there are more to communicate with.

Normally direct network effects are assumed to be positive, but they can also be negative. This is the case if consumers value a product less, if other similar consumers also use the product. Reasons for this can be congestion or that people wants to be different and unique.

In the two-sided market literature direct network effects is often referred to as own-side network externalities.

3.2.2 Indirect network effects

Indirect network effects arise when an economic agent values a product more, if more of another group of economic agents use the product as well (Shapiro & Varian, 1998). Farrell & Klemperer (2007) formulate it as *"Indirect network effects arise through improved opportunities to trade with the other side of a market"* (p. 1974). Furthermore, he compares network effect with scale economics: *"From a cooperative game theory perspective, network effects are just economies of scale: the per-buyer surplus available to a coalition of buyers and a seller increases with the size of the coalition"* (Farrell & Klemperer, 2007, p. 1974). However, network effects have difficult coordination and contracting issues making it a more challenging concept for companies to take advantage of (Farrell & Klemperer, 2007).

Indirect network effects arise when an economic agent wants to transact with another type of economic agent. As an example, this happens when a consumer wants to pay with credit cards. There is a positive indirect network effect from the amount of shops accepting a particular credit card. The same is the case the other way around. The more consumers with a specific credit card, the stronger the indirect network effect towards the shop owner.

Indirect network effects also arise with complementary products and services like in the gaming industry. More games and applications creates a positive indirect network effect making the platform more valued by the consumers. Again, the same is the case the other way around. More consumers adopting the product will make the product more attractive for game developers.

Negative indirect network effects exist in the case of advertising. Consumers might dislike advertising making the product less attractive.

In the two-sided market literature, indirect network effects are often referred to as cross side network externalities.

3.2.3   Intensity of network effects

While it can be valuable to recognize if a product is subject to network effects, it does not mean that it can be directly compared with other products subject to network effects and that the importance of user growth is the same. There is a difference in the intensity of the network effects and thereby the value consumers gain from the network size of the product (McIntyre & Chintakananda, 2014).

For social network sites such as Facebook, the network intensity is strong making the value very dependent on the installed base. A consumer would have zero value from a social network site with no other users. Many other markets have network effects, but can still be valued independent by a consumer. Gaming consoles are subject to network effects since a larger network size means more people to play with, but a single player can also enjoy games. The gaming console market are thereby not a *"pure network market"* like Facebook and thereby has a lower network intensity (McIntyre & Chintakananda, 2014, p. 119).

The network intensity of a market can be defined as *"the extent to which the value of a given product to a consumer is dependent on the size of an existing installed base of other users of the product"* (McIntyre & Chintakananda, 2014, p. 119). McIntyra & Chintakananda (2014) illustrates the factors influencing the network intensity of a market in their most recent research paper as shown in Figure 6. They identified three drivers of network intensity: (1) The need to interact with an installed base, (2) the need for complementary products and (3) the social dynamics including strength of network ties and the information flow.

Drivers of Network Intensity

| Need to interact with an installed base | Need for complementary products | Social dynamics (network ties, information flow) |

Increasing network intensity of the market

Total product value

Value from network size

Value from stand-alone features

1   2

Lower Network Intensity

• Tend toward multiple, evolving standards
• Generational competition
• Relatively stable competition based on technical quality, features

Higher Network Intensity

• Tend toward single, dominant standard
• "Winner-take-all"
• Unpredictable competition, influenced by "historical small events"

Figure 6 – Factors influencing the network intensity of a market (McIntyre & Chintakananda, 2014, p. 119)

The need to interact can be linked to the direct network effects and the need for complementary products can be linked to the in-direct network effects, both reviewed earlier. The social dynamics, as the frequency and depth of interaction among users, influence the network intensity of the market by creating stronger ties in the user base. Because of the social dynamics, a large user base is not necessarily better than a small. As an example, Google Plus has a large user base, since Google automatically creates a Google plus account to users of other Google services like Gmail. However, the users are not very active.

Recent research challenge the assumption that network effects are market-level only and based on the intrinsic nature of the core technology behind the market. McIntyra & Chintakananda (2014) identifies three ways firms can strategically manipulate the network intensity in a market. First, it can increase customer participation through information and opinions. Many companies operating online have implemented review sections on the website. This increases the network

value of the product even for products that have a very low value from network size. Second, firms can increase the opportunities for customer interaction with other customers. Cell phone providers do this when they offer free calls to other cell phone owners using the same phone provider. Game companies also offer online experiences. Third, by effectively managing complements to the core product. Either through internally developing complements, making incentives for third parties or by increasing the quality of the complements (McIntyre & Chintakananda, 2014).

3.2.4   Network externality theories

Network externality theories addresses market dynamics with network effects from an economic perspective (Katz & Shapiro, 1985). Incompatible technologies in emergent network markets will compete intensely, but consumers will choose the one they believe will get the largest install base, because of the network effects. This creates what is called a tipping point (Katz & Shapiro, 1985). The owner is able to enjoy the increased returns while the market is locked-in (Arthur, 1989). Markets of these types are often called "winner-takes-all" markets (McIntyre & Chintakananda, 2014) and are typically path dependent since the technology and firm winning the market achieved it by historical accidents (David, 1985).

3.3   Multihoming

Roberto Roson (2005) defines multihoming as:

"The term multihoming, originated in the technical jargon of Internet, is now universally used to define those situations in which some agents, in one or both sides of a two-sided market, adopt more than one platform, so that interactions may occur through a series of alternative channels" (Roson, 2005, p. 151).

Multihoming can occur in all two-sided markets and is an important concept, since it can change the competition drastically. Even though two-sided markets can lock-in consumers, sometimes this effect is weakened by the possibility to join more platforms at once. Consumers can choose to have more than one credit card, be on multiple social media sites, buy both a PlayStation and an Xbox, install more than one operation system and sign up on several online dating sites.

Multihoming is observed more often when there are no or low fixed costs (Roson, 2005). In cases where there are no fixed costs and only costs on transactions, the consumer can multihome without any added costs. The consumer can then freely access all platforms and has the option to use whatever platform preferred for each transaction.

Multihoming makes the analysis of two-sided markets a lot more complex. One reason is steering from the opposite side (Roson, 2005). In the case of a shop owner taking a payment from a customer, the shop owner can steer the customer to choose his preferred payment option.

3.4   Switching costs

While multihoming costs are the cost of adopting multiple platforms, switching costs are the costs of switching to another platform. Switching costs is classified as one-time costs in contrast to ongoing costs (Porter, 1980). Burnham, Frels & Mahajan (2003) incorporates Porter's classification by defining switching costs as *"the onetime costs that customers associate with the process of switching from one provider to another"* (p. 2). The switching costs must be associated with the switching process. However, it does not have to be incurred immediately after switching (Burnham et al., 2003). Neither is it limited to objective economic costs (Burnham et al., 2003). In that regard, Burnham et al. suggest a switching costs typology based on eight different types.

The eight different types are (1) economic risk costs, (2) evaluation costs, (3) set up costs, (4) learning costs, (5) benefit loss costs, (6) monetary loss costs, (7) personal relationship loss costs and (8) brand relationship costs. Each of the eight types of switching costs can be placed in either (a) Procedural switching costs, (b) financial switching costs or (c) relational switching costs as illustrated in Figure 7.
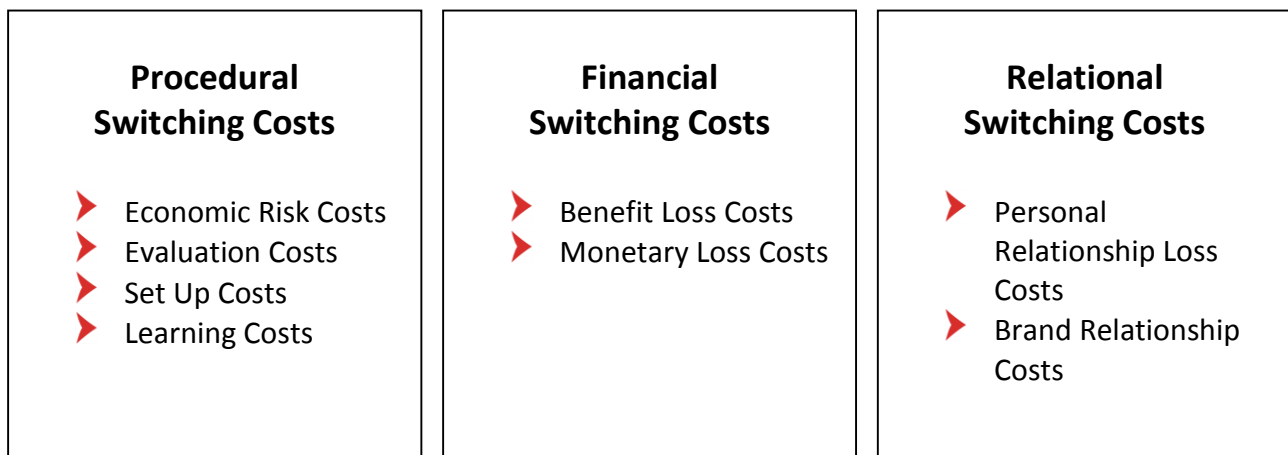
Procedural Switching Costs	Financial Switching Costs	Relational Switching Costs
➤ Economic Risk Costs ➤ Evaluation Costs ➤ Set Up Costs ➤ Learning Costs	➤ Benefit Loss Costs ➤ Monetary Loss Costs	➤ Personal Relationship Loss Costs ➤ Brand Relationship Costs

Figure 7 – A typology of switching costs (Burnham et al., 2003, p. 4)

Tawfik and Enders (2008) categories switching costs into four categories: (1) switching costs from relearning, (2) switching costs because of customized offerings, (3) switching costs because of incompatible complementary products and (4) switching costs resulting from customer incentive programs (Tawfik, 2008).

Klemperer (1987) argues that switching costs have two important implications. First, switching costs create demand inelasticity and thereby reduces competition. He states that *"switching costs segment the market into submarkets. Each submarket contains consumers who have previously bought from a particular firm and may in effect be monopolized by that firm"* (Klemperer, 1987, p. 377). Second, the monopoly power that firms gain over their market segments leads to strong competition for market share before consumers have attached themselves (Klemperer, 1987).

Zinkhan and Holbrook (1992) identify two product and market characteristics that generate switching costs in an industry. These are product complexity and provider heterogeneity. Rogers (1995) define product complexity as the extent a consumer perceives a product to be difficult to understand or use. As he argue, product complexity increases switching costs. The information search and comparison of complex products are more difficult for the consumer as there are more attributes associated with the product (Shugan, 1980). The complex product is also more difficult to learn or relearn when switched from another supplier (Wernerfelt, 1985). Product complexity might also lead to financial switching cost since a complex product often has a complex price structure (Burnham et al., 2003) and even relational switching costs since consumers tend to rely

more on brands to simplify the search when products are perceived as complex (Sheth & Parvatlyar, 1995).

Zinkhan and Holbrook (1992) identified provider heterogeneity as the second important product and market characteristics that generate switching costs. If there is a high extent of provider heterogeneity, the providers are seen as different or even non-substitutable. Provider heterogeneity reduces the likelihood that the consumer can transfer the knowledge and skills from one product to another. It increases the uncertainty of switching provider and influence the consumer perception that loyal points and reduces prices cannot be transferred (Klemperer, 1987). Furthermore, companies seen as different might create stronger bonds of identification with the consumers (Bhattacharya, Rao, & Glynn, 1995).

Other research about switching costs worth mentioning are Jackson (1985), who identifies that investments with a company or product increases switching costs. Klemperer (1987) and Wernerfelt (1985) focus on domain expertise, which can be split into (1) alternative experience defined as the breadth of experience the consumer has with different products in the market and (2) switching experience defined as the extent to which a consumer has switched providers (Burnham et al., 2003). Both types of domain expertise decrease switching costs. Finally, Jackson (1985) mention that time pressure and risk aversion as individual characteristics of the consumer increases switching costs.

Switching costs are relevant for online dating sites. First, for startups if they can lower the switching costs they might be able to get users onboard. Second, it is relevant for incumbent firms to keep the customers loyal to the dating site. The switching costs can have an influence on pricing decisions and the revenue model.

3.5   Revenue models

While every business can be said to follow a business model, it is only in the past decades or so that business models have found a way into the public consciousness (Teece, 2010). Companies make money in different ways today than in the industrial era. Scale was extremely important and capturing value typically was rather simple and just a matter of packaging the technology and intellectual property into a product or package. Today the competition is stronger and the need for differentiation and alternative business models is greater. Especially the development of the

Internet and e-commerce have been drivers to the proliferation of Business models (Zott, Amit, & Massa, 2011). However, emergence of the knowledge economy and opportunities to outsource business activities have been important drivers (Teece, 2010). Since the Internet the occurrences of the business model term has been exponentially increasing and even more in non-academic articles highlighting the importance of the concept (Teece, 2010).

There are some confusion in the literature about business models and this stems from researches referring to business models without talking about the exact same concept. Furthermore, authors frequently do not even give a definition of the term (Linder, 2000).

Timmers (1998) simply describes what a business model is and defines it as an architecture of the product, service and information flows. He also add composing elements like sources of revenues and business actors with roles and benefits (Timmers, 1998). In the same category, Magretta (2002) defines a business model as being *"a way of telling a story about the business"* and explains that a business model is not a strategy, even though frequently used as such (Magretta, 2002, p. 87).

A more recent and popular approach to business models is the business model canvas made by Osterwalder and Pigneur (2010). The business model canvas consist of nine blocks that creates the rationale from their business model definition: *"the rationale of how an organization creates, delivers and captures value"* (Osterwalder & Pigneur, 2010, p. 14). The nine blocks are value proposition, customer relations, target customer segments, distribution channels, key activities, key resources, key partners, cost structure and revenue streams.

Revenue models are part of the business model concept and are one of the nine blocks in the business model canvas. In this paper, we will focus specifically on the revenue model, since we found, that this were an area where many dating platforms had different approaches. The revenue model is also an important part of two-sided markets as the pricing are more complex than traditional markets.

Some of the remaining nine blocks are discussed as part of other theories. The customer relations is closely related to reputation, target customer segments are applied when we discuss niches in online dating and the value proposition, distribution channels, key activities, key resources and key partners are identified where relevant for each case company studied.

In an online context of revenue models, the Internet has given birth to many new business concepts where some have gained great popularity. Google, Facebook, eBay and YouTube just to name a few. Online platforms where network effects are highly prevalent have in particular reached massive amounts of users and been fast to announce their success. The revenue models have however been unclear and some companies are still struggling with turning a profit from their many users.

In many cases, the traditional advertising model has been transferred to the online businesses. This happened in the newspaper industry where banners and pop-ups were not a successful approach. *"Pushing a message at a potential customer when it has not been requested, and when the consumer is in the midst of something else on the Net, will fail as a major revenue source for most Internet sites"* (Clemons, 2009, p. 1).

According to Clemons (2009), advertising will fail on the Internet, since (1) consumers do not trust advertising, (2) do not want to watch advertising and (3) do not need advertising (Clemons, 2009, p. 2). To support this Clemons (2009) refer to falling revenues in the online advertising industry. While the revenue source for companies selling physical products and services are obvious, he outlines five alternative revenue models for companies selling virtual things (Clemons, 2009, p. 3): (1) Selling content and information, (2) selling experience and participation in virtual communities, (3) selling information gathered from online experience, (4) selling accessories for virtual communities and (5) selling content extracted from virtual communities.

In addition, four revenue models for companies selling access: (1) Misdirection, (2) evaluation, assessment, and validation, (3) social search and (4) contextual mobile ads.

The revenue models are relevant for dating sites as alternatives to advertising. In the case studies, we will look at what revenue models the dating sites are adopting and in the discussion section, we will discuss how dating sites can use a variety of revenue models as alternatives or complements to advertising.

Like Clemons (2009), a study in 2008 classifies revenue models for social network sites by looking at real world companies (Enders, Hungenberg, Denker, & Mauch, 2008). They find that the revenue models can be classified into advertising models, subscription models and transaction models (Enders, Hungenberg, Denker, & Mauch, 2008). Furthermore, a framework is defined

where they combine the revenue models with revenue drivers. The revenue drivers are number of users, willingness to pay and trust. The impact of each revenue driver is different depending on the revenue model. For advertising models, the number of users have a very high impact, while Willingness to pay and trust are a lot less important. For subscription models, willingness to pay has a very high impact, while the number of users and trust is less but still important. For transaction models, trust has the highest impact, while the number of users has slightly less impact and willingness to pay has a medium impact (Enders et al., 2008).

The model from Enders et al. (2008) is well suited for our analysis, as it is a simple way of classifying the business model while offering value for the discussion. The implications of trust is however different for online dating than for social network sites. Trust is much more important for online dating, since the members do not know each other. This is the same argument Enders et al (2008) uses for transactions models, where they stresses the important of trust (Enders et al., 2008). Transaction models for social network sites are most often used when introducing trade between members and thereby increases the need for going outside the personal network to increase the likelihood of a trade. We argue that in the case of online dating, trust is important regardless of revenue model.

Many businesses are not exclusively in one of the categories, but will usually have one primary revenue model with supporting revenue models.

3.6   Reputation

A definition of reputation according to Jøsang, Ismail, & Boyd (2007) is that *"reputation is what is generally said or believed about a person's or thing's character or standing"* (p. 5). The difference between trust and reputation is that you can trust a person because of, or despite of, their reputation (Jøsang et al., 2007).

In the online world, feedback is often collected, aggregated and distributed in reputation systems pertaining to a particular participant's history (Resnick, Kuwabara, Zeckhauser, & Friedman, 2000). There are different kind of online feedback mechanics. The system can have easy quantifiable predefined inputs such as ratings or stars. Alternatively, it could have non-quantifiable input such as comments or forum feedback to postings or articles (Dellarocas, 2003).

Word of mouth, as an online feedback mechanism, is another channel for companies to grow their brand strength, acquire, and retain users that is both low cost and complementary to advertising. The opposite is also true as negative feedback quickly propagates and can cause great damage to the brand (Dellarocas, 2003).

Due to the nature of the internet it is not always possible to trust that the sites that claim they provide honest reviews truly are just that, because *"the mediated nature of online feedback mechanisms raises questions related to the trustworthiness of their operators"* (Dellarocas, 2003, p. 1411). This could be operators such as one of the many dating review sites that all have affiliate links set in their massive lists or the "top-10 best dating sites" operators that have sponsored advertisement to specific sites in their banners and who perhaps coincidentally have the same sites listed in their top ten list.

We focus on two important elements in reputation, online word of mouth as the propagator and trust and credibility as the motivator. In particular how trust influences consumer decision-making when interacting with or speaking about a dating site.

3.6.1   Word of Mouth

The definition of word of mouth (WOM) has many forms and means of classification depending on the scope the author wants to address. The Word of Mouth Marketing Association has formulated it as *"The act of someone sharing something interesting with someone else"* (WOMMA, 2015). Arndt (1967) said that WOM was an *"oral, person-to-person communication between a receiver and a communicator whom the receiver perceives as non-commercial, concerning a brand, a product, or a service"* (p. 3). Hennig-Thurau et al. (2004) defines e-WOM as *"any positive or negative statement made by potential, actual, or former customers about a product or company which is made available to a multitude of people and institutions via the Internet"* (p. 39).

Whether addressing WOM or e-WOM, the general definitions and theories apply to both of them. However with e-WOM, the effects can be vastly bigger in both a positive or negative direction due to the scope of the audience available online. More so, the time in which word can spread online with viral growth is another major difference between them.

Companies engaging in e-WOM are able to both follow discussions and public shared information about their brand and services. This allows companies to measure and respond to changes in the perception of them or address user related problems before they escalate out of hand. This is not possible in the offline world, where communication is mostly private or only privy to a few participants. That is not to say that private communication does not exist online where message exchanges can happen in emails, private chatrooms or closed forums. Nevertheless, a study has found that approximately 10% of all (US) users complain online about something each day, and 20% of that happens on Facebook while other social sites like twitter and Instagram are about 5% each (VentureBeat, 2014).

3.6.2   Trust and credibility

Trust is the representation of an individual's willingness to have faith in the word of another person that is perceived as reliable (Moorman, Zaltman, & Deshpande, 1992). For companies, trust is important. Customers are less likely to commit time and monetary resources on products or services if the company is not trustworthy or appear credible.

A conceptual model was developed that identified eight different drivers of trust and linked websites and consumer characteristics (Bart, Shankar, Sultan, & Urban, 2005). The model was further expanded with additional identifying attributes for each of the eight drivers (Chaffey & Ellis-Chadwick, 2012). The model is shown in Figure 8 with all the attributes listed for each driver. For instance, brand strength is affected by advertisement, WOM and offline contracts whereas both privacy and security share the same characteristics of disclosure, reputation and guarantees.

Unlike trust, which is based on faith in another person, credibility is based on the perceived acknowledgement of another person's level of skill or experience, relevant knowledge and confidence in an objective and unbiased message (Belch & Belch, 2003). This level of credibility is normally not attributed to information coming from the company itself and messages from other sources such as WOM is generally considered more credible, especially if it originates from people who are considered unbiased (Belch & Belch, 2003).
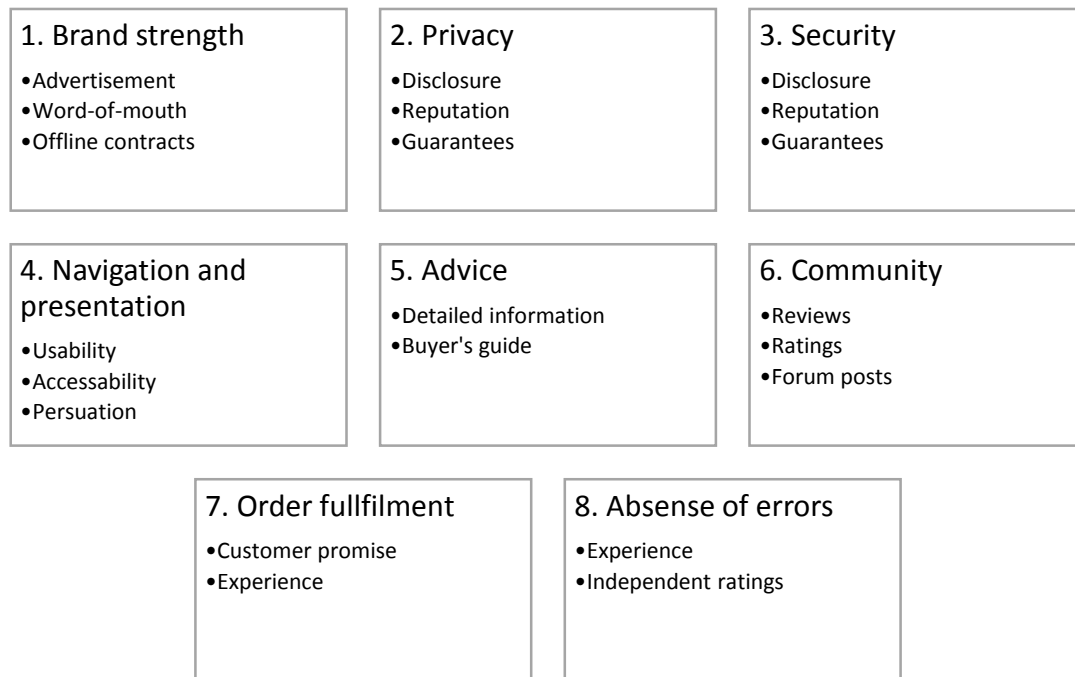
1. Brand strength	2. Privacy	3. Security
• Advertisement • Word-of-mouth • Offline contracts	• Disclosure • Reputation • Guarantees	• Disclosure • Reputation • Guarantees
4. Navigation and presentation	5. Advice	6. Community
• Usability • Accessability • Persuation	• Detailed information • Buyer's guide	• Reviews • Ratings • Forum posts
7. Order fullfilment	8. Absense of errors	
• Customer promise • Experience	• Experience • Independent ratings	

Figure 8 - Drivers of Trust (Chaffey & Ellis-Chadwick, 2012, p. 89)

The basis of e-WOM for consumers is being able to trust information posted online by an unknown actor who may or may not be telling the whole truth. It is therefore pivotal that companies understand the importance of building trust with their customers and further how a general consumer goes through different phases as trust increases.

3.7 Theoretical approach

Reviewing the literature resulted in a theoretical basis for the case studies and discussion. As explained in the section on research method, the literature review was conducted iteratively, finding new relevant theories while analyzing the industry. As seen in Figure 9, we concluded with two-sided markets as the underlying knowledge of the market, while looking at the cases on four dimensions. The importance of the four dimensions is rooted in the research question as well as the literature review, especially from the literature on two-sided markets.

Since network effects increase the value as the customer base grows, it is difficult to compete with incumbent firms even with a superior service. Creating the customer base was on this basis identified as essential for online dating startups. It would be naïve for a new startup to believe that customers join the platform without active actions by the startup.
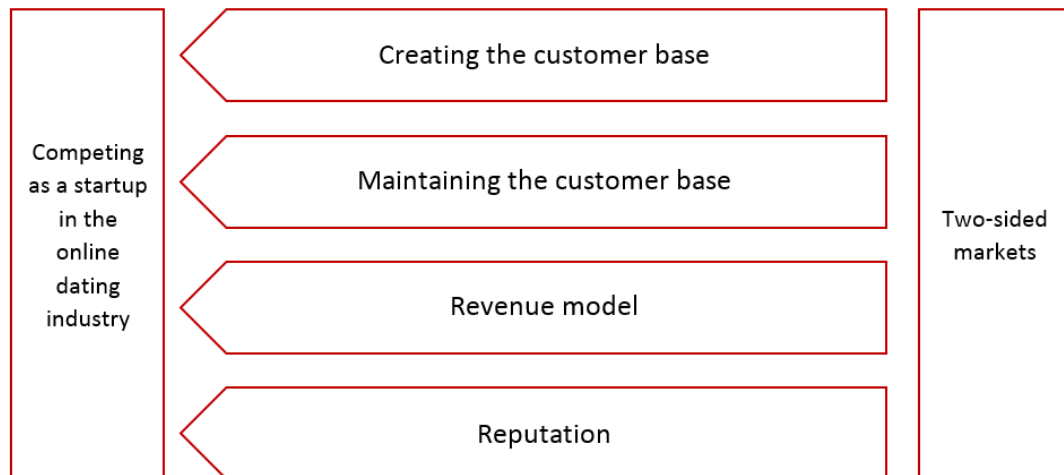
Figure 9 – Theoretical framework

When customers join the online dating site, it is important to maintain them as a member and keep them active. Part of this is related to delivering a good user experience and fulfilling the demand of the members.

The revenue model is essential for profiting from the service. The decisions regarding the revenue model influence the other dimensions. A free or low cost membership fee increases customer acquisition and maintaining, but can also influence the reputation in either a positive or negative way. If it is free, customers might perceive the quality as low and it might actually be lower due to the people that are attracted.

Reputation was found to be important for two-sided markets (Pang & Lee, 2008; Resnick, Zeckhauser, Swanson, & Lockwood, 2006) and in extension online dating. For instance, online dating requires sensitive personal information, is influenced by cultural beliefs and values, and have personal security issues when two strangers meet each other.

4 Industry analysis

The section begins with general analysis of the dating industry and follows up with two lists of empirically gathered data on important and unique dating sites and their various central properties. Based on these findings, a classification framework is developed.

4.1 The online dating industry

The installed base in the dating industry increased, even through the recession in 2008, with a growth of 3.5% every single year up to 2014.[1] In the US in 2014, there were 3,924 dating sites catering to the growing industry and the user growth rate doubled to 5%.[2]

In the recent years, a surge has been moving the majority of the industry into the mobile area. As can be seen in Figure 10, the amount of mobile dating users surpassed the users of websites in 2010.[3] Furthermore, the number of people using dating apps are faster growing than that of general mobile apps. This means that the growth trend for dating apps surpassed the average mobile growth.
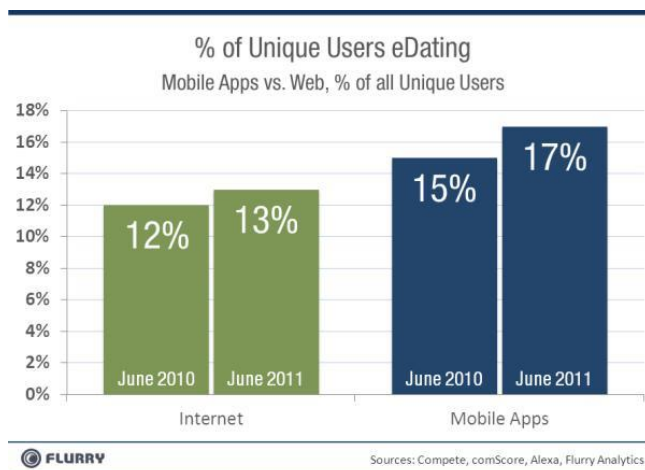
Figure 10 – Web vs. Apps percentage of unique users[3]
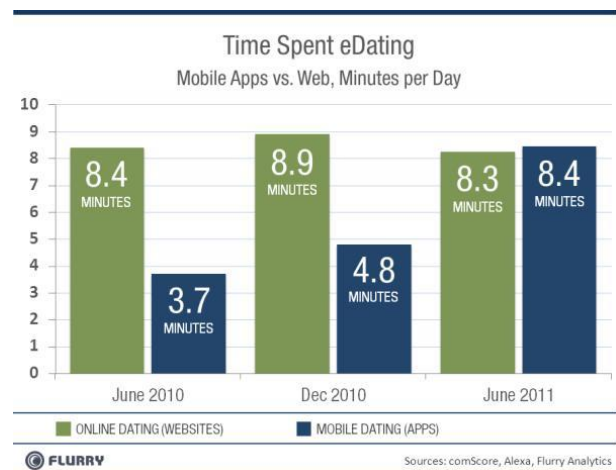
Figure 11 – Web vs. Apps time spent[3]

Besides the amount of users, the industry has also seen significant increase in the total time spent using apps. In Figure 11, it is seen that the mobile time spent surpassed web use in June 2010. This further exacerbates the problem with web dating and shows that mobile engagement is increasingly important in the dating industry. These factors have been a steady progress over the past couple of years and have changed the mechanics of dating. A more in-depth view of the mobile industry is found in Appendix 3 – Mobile Industry.

The growth in the industry has given birth to a vast amount of dating sites besides the existing incumbents, all of them having numerous features, options and possibilities that promises the best way of meeting new possible partners. The following sections will delve deeper into the different sites and discover how they operate.

4.1.1 Online dating platforms

The important dating sites are identified in the following two tables. The two tables are not exhaustive; many other small sites that never acquired enough users to be significant or are otherwise irrelevant are not listed. In general, dating sites are in the thousands. However, many sites are merely skins or imitations of the same site, but with a different design and a shared user base.

The tables provide a summarized listing of established or new dating sites with their current revenue model, if they provide free messages, when they launched, their current Alexa ranking and a mobile ranking. Alexa is a company that provides an estimate of usage of websites. Previously it only included data from users that had installed the Alexa browser toolbar, but have since 2008 included other external sources. The Alexa rankings were acquired by April 2015, and the mobile rankings are calculated in another table that can be seen in Appendix 4 - Dating mobile app rankings.

The tables is sorted based on the mobile ranking first and Alexa ranking second in order to provide an approximate ranking of the popularity of the dating sites. Since most of the dating sites have a mobile app and such important sites such as Tinder are mobile exclusive, it was found to be the most reasonable metric for comparison. In addition, during the research strong indicators found that most dating sites had the majority of their business transferred to mobile.

4.1.2 Established dating sites

The first table in Figure 12 contains a complete list over online dating websites obtained from the Wikipedia entry about the subject.[4] In addition to the list, we have added two other important established dating sites. The additions, Tinder and Howaboutwe, are based on their size and the uniqueness of their site and is in the Established dating site list.

Dating site	Revenue model	Free message	Launch	Alexa	Mobile #
Tinder	Freemium	Free – (100 matches per day)	2012	64,611	1
Plentyoffish	Ads, premium	Free	2003	588	2
Match	Subscription	Non-free	1995	811	3
Badoo	Freemium, Subscription and micro-transactions	Partial (10 free contacts each week)	2006	280	4
OkCupid	Freemium and micro-transactions	Free	2004	431	5
Zoosk	Subscription	Non-free	2007	2,265	6
AYI	Subscription	Non-free	2007	21,831	9
eHarmony	Subscription	Non-free	2000	3759	11
Ashley Madison	Subscription	Partial – Free for women	2001	705	12
Speeddate	Freemium	Partial - Free 5 min live chat	2007	114,521	13
HowAboutWe	Subscription	Non-free	2010	50,187	14
JDate	Subscription	Non-free	1997	19,706	15
PlanetRomeo	Freemium	Free	2002	3,139	16
Adult Friend Finder	Subscription	Partial – Free to answer	1996	879	17

Beautifulpeople	Subscription	Non-free	2002	87,390	18
DateMySchool	Subscription	Non-free	2010	155,632	19
LavaLife	Subscription	Non-free	2001	169,885	21
Gleeden	Credits	Partial – Free for women	2009	31,797	23
AnastasiaDate	Subscription	Non-free	1997	9,300	-
Meetic	Subscription	Non-free	2001	18,353	-
Chemistry	Subscription	Partial – 5 free matches per day	2006	20,337	-
Perfectmatch	Subscription	Non-Free	2003	131,167	-
Matchmaker	Subscription	Non-free	1997	148,554	-

Figure 12 - Established Dating Sites

Tinder is the first on the established dating site list. They achieve a very high Alexa ranking even though they only have an information website. In mobile, they are the largest by a high margin.

The second site is PlentyofFish, which is the oldest free dating website and has been a major presence in the industry for over a decade. Match has been around for twenty years. They were the first dating service to go online and have a significant presence and awareness in the consciousness of daters around the world. Sites such as eHarmony, Zoosk, OkCupid and Meetic have also claimed their fair share of the market.

Niche sites focus on a smaller segment of the market. For instance, Ashley Madison focus purely on extramarital people and their need for discretion. They have a strong mobile presence, which is surprising considering how easy it is for a partner to find the app on their phone. Evidently, they have been able to build a strong trust around the brand within their niche segment. Other such

niche sites are PlanetRomeo who focuses on gay dating or AnastasiaDate who seeks to match Russian women with western men.

4.1.3 Unique dating sites

In Figure 13, startups are listed that have several factors differentiating them from the established dating sites. Most of these factors are ways in which the concept have radical differences compared to the majority of the established sites. It is also factors that relates to the niche segment that the sites target.

Dating site	Revenue model	Free message	Launch	Alexa	Mobile #
Down	Free	Free	2013	233,963	7
Coffee Meets Bagel	Subscription	Non-free	2013	16,174	8
Hinge	Free	Free	2011	73,239	10
Grouper	Transaction	Free	2011	397,035	15
TrintMe	Free	Free	2014	2,990,988	20
Carrot Dating	Subscription, Credits	Non-free	2013	1,031,595	22
Tastebuds.fm	Subscription	Non-free	2010	45,275	-
Dating Ring	Subscription	N/A	2013	259,799	-

Figure 13 - Unique Dating Sites

For new and unique dating sites, we observed a mobile heavy focus with often visually well-designed homepages and huge buttons linking to their mobile apps. TrintMe is a mobile-only dating site, which explains their low Alexa ranking. Coffee Meets Bagel and Hinge have high Alexa rankings even though they are heavily mobile focused. This can be explained with massive media coverage on tech blogs and news sites. Down, the previously infamous BangWithFriends, has less media coverage but still a higher mobile rank showing a high user engagement, even if they do not have the same media presence. The Dating Ring is a new concept that tries to change the way dating is done and have almost no online functionality on their webpage and no mobile app at all.

4.2   Initial findings

In the identification and initial analysis of dating sites, it was found that most of the older dating sites have subscription revenue models. The revenue model for most new dating sites are freemium or a combination of free access and transactions. This is most likely due to the nature of two-sided markets and the need to build up a user base and reach a critical mass of users before being able to charge them.

Additionally, the dating sites varied in two ways. First, in whom they appeal to. Some dating sites were mainstream with a broad focus on all types of people seeking different kind of relationships. In contrast, other sites had a niche focus. The niche could range from very specific to broad. Second, they varied in concept. Many dating sites followed a generic approach with almost the same platform, functionality and sometimes even similar design. Other dating sites had a unique concept.

These two ways of positioning comply with Porter's three well-known generic strategies. Porter argued that companies could pursue competitive advantage by following one of three strategies: *"The two basic types of competitive advantage combined with the scope of activities for which a firm seeks to achieve them leads to three generic strategies for achieving above-average performance in an industry: cost leadership, differentiation or focus. The focus strategy has two variants, cost focus and differentiation focus"* (Porter Michael, 1985, p. 11). In the case of online dating, cost leadership is not a viable strategy since the marginal cost of selling access is close to zero.

Originally, Porter stated that companies could only pursue one of the three strategies to avoid being *"stuck in the middle"*, but later research suggest that there are plenty of examples to support that companies can indeed reach success by pursuing more than one of the three generic strategies (Dostaler & Flouris, 2006). Porter defines being stuck in the middle as "*a firm that engages in each generic strategy but fails to achieve any of them*" (Porter Michael, 1985, p. 16). It is important to note however, that Porter does acknowledge some rare cases where companies can successfully follow multiple generic strategies, and that focus strategy is divided into substrategies where it is combined with either cost leadership or differentiation (Porter Michael, 1985).

4.3   The classification model

Based on the observation that online dating platforms vary in the use of the two remaining strategies, we establish a classification model. The dimensions correspond to if the two strategies are followed.

4.3.1   Market focus

We define the market focus dimension as how the dating site focus on a specific customer group. A dating site with a broad market focus is placed in mainstream, while a dating site with a narrow market focus is placed in niche.

Determining if the market focus is niche or mainstream was in some circumstances difficult, since the target group can be specific in different ways. While it is easy to define religious sites, sites based on ethnicity, sites based on homosexuality and dating sites based on a common interest as having a niche market focus, it can in sometimes be more difficult for dating sites that target a broader audience, but still are specific in other ways. These ways include dating sites with limited geographical scope and dating sites that focus on a specific kind of dating, e.g. casual dating.

We define the following as having a niche market focus:

- Dating sites based on a specific common interest.
- Religious and ethnical dating sites.
- Dating sites with a specific geographical focus.
- Dating sites that focus on a specific kind of relationship.

4.3.2   Concept differentiation

We define the concept differentiation dimension as how the dating site differentiates from the generic concept and norms of the dating industry. The generic way is based on our observations, where it was observed that most sites follow the same concept and has almost the same functionality. Based on the observation, we define the following as the generic concept:

- The dating site consist of a database of users where each user can contact other users.
- The user profile is based on profile texts and personal information.
- The user can search on basic personal criteria.
- The dating site suggest people that could be a match.

> The matches are made by an algorithm without any staff involvement.

> The dating site is primarily designed for desktop browsers.

Our definition of the generic concept is however not something new. It is often referred to as the *"algorithm-matching"* dating sites or the *"profile browsing"* approach (Finkel & Sprecher, 2012).

A dating site is classified as having a unique concept differentiation if it differentiates substantially on one or more of the mentioned parameters.

4.4   Classification of dating sites

Based on the two dimensions, that were identified, we produced a classification framework to give a better overview of the industry. The dating sites where placed in the framework represented by their logo. The classification can be seen in Figure 14.

Figure 14 – Classification of dating sites

In the lower left corner, the Generic-Mainstream quadrant consist of old dating sites launched in 2007 or earlier and are predominantly subscription based. To the right, the Generic-Niche quadrant have mostly old dating sites that are subscription based. A few do however have a different revenue model that is segment specific within the niche.

At the top-left, the Unique-Mainstream quadrant has many new dating sites that are mobile heavy or mobile-only as well as other unique factors. Many of these have revenue models based on freemium or transactions with a few subscriptions mixed in. To the right, the Unique-Niche have the fewest sites and almost all of them are between 1-5 years old. The revenue models are diverse and spans free, transactions and subscriptions.

5   Case studies

In this chapter, we outline how we have selected the cases, give an in-depth study of the selected cases and end with a summary and comparison of the cases.

5.1   Selection criteria

The cases selected were based on the following criteria:

- At least one case in each quadrant in the classification model.
- At least one of each revenue model.
- Have a different time of entry into the market.
- Have a large market share, innovative technology or a unique concept.
- Have significant public available information.

5.2   Cases selected

Cases	Reason for study
Match	Match was among the first to take dating online. They have been successful in acquiring a huge installed base and have been among the largest online dating sites since. The business model is based on a subscription model and the dating site was classified as Generic-Mainstream. Match is today the core online dating platform owned by IAC, making it an obvious choice of further study.

PlentyofFish	PlentyofFish were also classified as Generic-Mainstream. However, PlentyofFish was the first free dating site that was able to implement a sustainable revenue model and carve out a new market in the dating segment. Today, it is one of the largest dating sites in the world counting both free and paid sites and the business model is a combination of ads and premium services. They were selected because of their initial advertising business model with otherwise free access.
Tinder	Tinder was classified as Unique-Mainstream due to its technological and innovative mobile-only app. They were the first successful mobile-only dating app and found a new way to reach a previously untapped segment of the market. They were completely free since their launch, as they had not yet found a way to generate revenues that fit the mobile platform without alienating their user base. However, during the writing of this paper, Tinder launched a new premium service and the details are included in the case.
Ashley Madison	As the biggest and oldest dating site focused on infidelity, Ashley Madison has a global presence in many countries today. They are classified as Generic-Niche because they have no interesting or differentiating concept and focus on a very narrow niche of the dating industry. The revenue model is transaction based. It exploits the market differences between men and women and their willingness to pay for contact with the opposite gender.
The Dating Ring	The Dating Ring is a relatively new site with a previously unseen concept that tries to mesh the old with the new. Their idea was to return the personal matchmaker from before dating went online and bring it into an online setting. Due to their unique and specific focus, they are classified as Unique-Niche. They started with a transaction based revenue model but changed it to a subscription model.

Furthermore, short descriptions of another five key companies are included in Appendix 6 - Other key companies in the industry that will provide some depth and context on a few issues and comparisons when reading the cases or during the discussion.
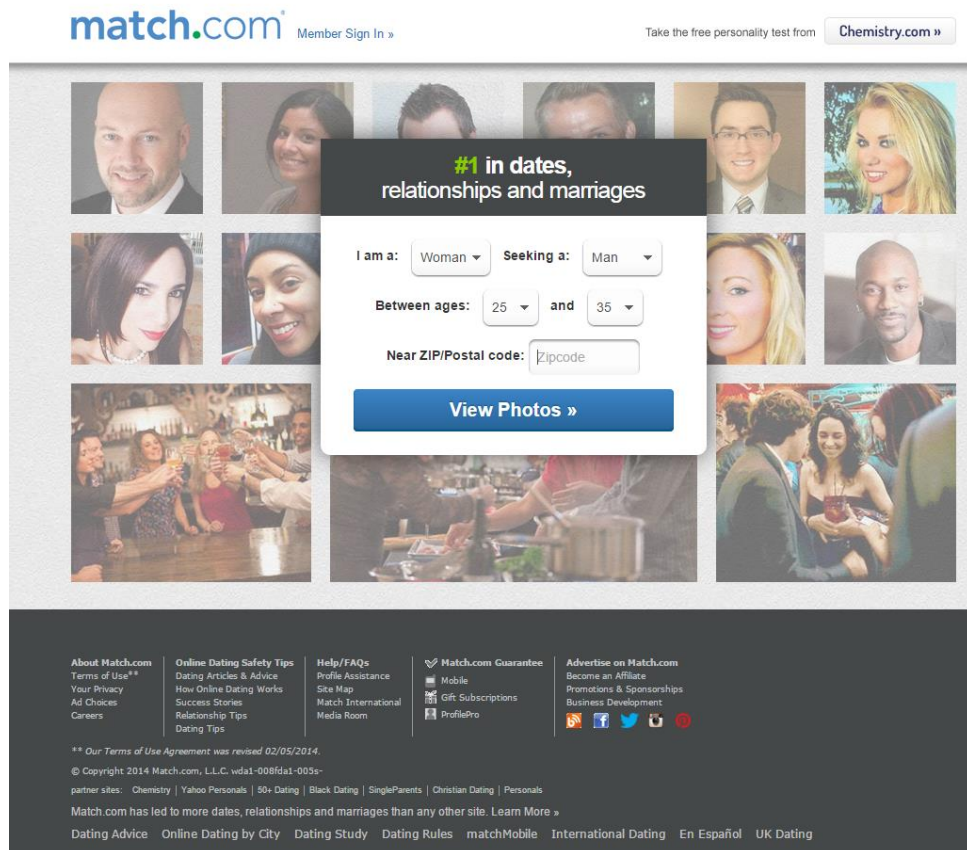
5.3   Match

5.3.1   Introduction to Match

Match was founded by Gary Kremen and Peng T. Ong in 1993 as a proof-of-concept project under the company Electric Classifieds Inc. In pitches to get investor funding, he positioned match as the first classifieds site, soon to be followed by other online classifieds such as jobs, housing and cars.[5] Electric Classifieds aimed to provide advertising systems for newspapers and online dating was just one platform where this would happen.

Early on in 1994 before the launch, Fran Maier joined the team with the purpose of developing strategies for getting women on board by making the website and attitude women friendly. Match believed that if the women where present on the platform; the men would quickly follow.[6]

Match went live in April 1995. It started as a free beta, where everyone joining early would receive free lifetime membership. This would ensure an initial database of members, so the first paying customers would be able to be matched with someone.[5]

Online services were uncommon when Match went live. Even the Internet was not prevalent in people's homes: *"In 1994, when only about five percent of Americans had Internet access, Kremen took a $2,500 advance on his credit card to buy the domain name Match.com"*.[5]

His colleagues described Kreman as a high-energy visionary. Fran Maier, the former General Manager of Match said: *"He thinks big... he's very smart"*.[5] He was aiming to go big with Match and he recognizes the need for funding. Late in 1994, before the launch, Kremen secured about $1.5 million in funding from angel investors and a few venture-capital firms with Canaan Partners leading. The initial funding in place, Kreman could now focus on the first goal of Match – Building the user base.

5.3.2   Creating the customer base

Match recognized the need for growing a large installed base. With that in mind after the beta, they launched the website with free access in the first year. They benefitted greatly from first-mover advantages. There have always been dating clubs and many different kinds of dating matchmaking services offline, but Match was the first to take advantage of the Internet in dating matchmaking.

Since online dating was a new concept, there was an interest from Media to write news about online dating platforms. One year after the launch, the company succeeded in getting Match covered on the Wired magazine.[7]

Match took advantage of the media interest from the beginning and hired David Landis, president of the public relations firm, Landis Communications Inc. to help reach the media and promote the site in the early years.[8] The director of communications in Match was retitled to *"Vice President of Romance"*.[9] This led to bookings on popular TV shows like 60 Minutes and Today Show and articles in People magazines, New York Times and USA Today.

A subscription-based model was implemented in February 1996 one year after the launch. By September, Match had 653,182 paying members and a revenue of $33 million.[10] Trish McDermott,

vice president of romance and communications said, that they at that time had reached enough members to provide critical mass and *"The team felt that people would be willing to pay for content that would be meaningful in their lives"*.[10]

Being the first-mover in revolutionizing dating was challenging. As Melanie Angermann, the Vice President of Marketing said, *"People have always been willing to talk about, say, buying a book or shopping for clothes on the Internet. No one wanted to tell anyone that they were on a personals site. It had this huge legitimization issue"*.[11] While that was especially true in 1995, the legitimization has also been a challenge later: *"We're still not all the way there in getting rid of the personals stigma. Socially it is very legitimized, everyone's heard about it. However, there are still a lot of people who say, 'I think online dating is great - but it's not for me' "*.[11]

Match struggled to make online dating socially acceptable. Appealing to women and creating a new VP title were the first steps. In addition, many of the concepts underlying the Match platform have been made to conform to the norms and values in society. Social unacceptable dating behavior is not accepted by the platform either, e.g. by not allowing married people to use the dating service and by prohibiting *"solicitation of multiple additional partners"*.[11]

Not only has Match prohibited social unacceptable behavior to gain legitimization, but also they focus on long-term relationships in marketing and communication. As written by James Maguire in an article about online dating: *"By setting up the site to avoid practices that some might find unusual, it helps present Match as a socially acceptable place to meet a partner. If using the Internet has been viewed as a strange way to mate search, then arguably Match's more traditional feel counteracts this, creating a comfort zone for a larger percentage of users"*.[11]

To ensure high quality member profiles, Match reads and must approve new member profiles. *"We take pride in having quality members and we're very strict about our standards on our site. We've found that our users are very serious about looking for a great date for this weekend, or something a lot more long lasting"*.[11]

Match pursued a mainstream focus in contrast to other online dating platforms that chose to compete in a certain niche. Examples include religious dating sites catholicsingles.com for Catholic singles and jdate.com for Jewish singles, doggiedating.com for pet owners and iowa-dating.com for dating in a specific city. [11]

By having a mainstream focus, Match has built an enormous database with millions of different types of singles that can be matched on many different parameters. This ensures that there are relevant matches for everyone and that the database of singles is a mirror to the offline world.

5.3.3 Maintaining the customer base

In 1998, Cendant, a provider of business and consumer services within the real estate and travel industries, purchased Match.[12] However, only one year later Cendant sold Match to IAC.[12]

As a large corporation, IAC had opportunities that the original startup company with limited funds did not. Investment possibilities enabled IAC to acquire dating and matching services that would gain access to other online dating markets or complement the Match platform and the capabilities of the company.

Examples of acquisitions are People Media, a leading operator of 27 targeted dating sites including BlackPeopleMeet, SingleParentMeet, SeniorPeopleMeet, BBPeopleMeet and LDSPlanet[13], uDate[14], SinglesNet[15], DateHookup[16], OkCupid[17] and recently HowAboutWe.[18]

Match has expanded to other countries by buying existing leading dating companies in their regions. Examples include the online dating platform in France Netclub[19] and the Chinese platform eDoDo. [20]

Strategic partnerships have been an important asset for Match. As with acquisitions, partnerships have been used to move into new markets and gain a larger user base. In 2003, Match partnered with Univision Online[21] and La Opinion Digital[22] to provide Spanish-language online personals. In the same year, AOL agreed to an exclusive UK partnership, which with AOL's user base in the UK with more than 2 million users, was a key element to get into the country.[23] Match also partnered with MSN and extended their partnership several times to include more markets, like Japan, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Span, Sweden and South Africa.[24]
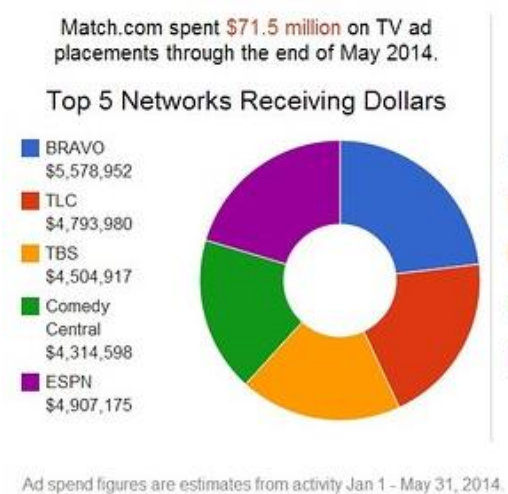

Match.com spent $71.5 million on TV ad placements through the end of May 2014.

Top 5 Networks Receiving Dollars

- BRAVO $5,578,952
- TLC $4,793,980
- TBS $4,504,917
- Comedy Central $4,314,598
- ESPN $4,907,175

Ad spend figures are estimates from activity Jan 1 - May 31, 2014.

Figure 16 - Match Advertisement 2014[25]

One way of maintaining the user base is by using traditional media advertisement. Figure 16 shows the advertisement spending from January to May in 2014 is $71.5 million on TV advertisement in the US alone.[25]

5.3.4   Reputation

A great deal was done by Match to stand out as a serious dating company, change the negative view on online dating and ensure a women-friendly reputation.

Match has however been fighting some negative stories in the press started by lawsuits. In November 2005, Matthew Evans filed a class suit together with more than thirty other members. The claim was that Match would show members, when their membership is about to expire, a perfect match score with people secretly employed by Match. The purpose was to keep customers paying by ensnaring them with messages and then go on fake dates giving them false hope. The claim stated that these employees go on as many as 100 dates a month. While the suit was dismissed by the court in 2007, it was still a story in the news.[26]

In 2009, another class suit was filed concerning the way Match's match algorithm works. The suit claimed that paying members were deliberately matched with non-paying members to make the non-paying buy a subscription. As represented by the attorney *"Match misleads paying subscribers by charging them for the ability to write e-mails to members who can't reply to their e-mails or even read them".*[27]

One year later, a similar class suit was filed in 2010. This time the claim was that Match maintains inactive and fake dating profiles with purpose. This lures consumers into subscribing with an expectation of contacting real and active members. Match won the case since the website agreements does not guarantee the accuracy of the profiles.[28]

In 2011, Match was sued by a woman for $10 million, who was raped and almost killed by a date found on Match. She claimed that Match does not warn the users about the dangers of online dating. Match responded by calling the lawsuit absurd:

"What happened to Mary Kay Beckman is horrible, but this lawsuit is absurd. The many

millions of people who have found love on Match.com and other online dating sites

know how fulfilling it is. And while that doesn't make what happened in this case any

less awful, this is about a sick, twisted individual with no prior criminal record, not an

entire community of men and women looking to meet each other". [29]

While Match claimed that the member did not have any criminal record, it was later found that he had previously been charged for sex crimes and that even a Google search on his name would have revealed that.[30] [31] Match responded soon after by stating that a basic sex offender screening would be implemented.[32]

5.3.5 Revenue model and pricing scheme

Like on most other dating platforms, the user process flow can be described in three steps: (1) Register a profile, (2) search profiles and (3) connect or contact another user. Match supplements the searching with a matching algorithm suggesting matching based on the information given in your own profile:
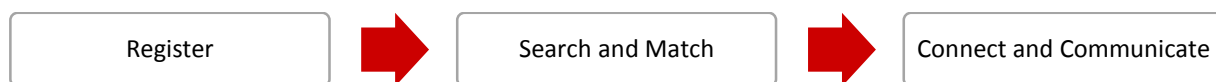
It is free to register a trial user on Match. A trial user has free access to the first two steps. The user can register, upload profile and gallery images, search or be matched with other users. There are no limitations on the first two steps in the user process flow.

It will however require a paid subscription to contact another member. Match offer a standard subscription, standard + Premium, Standard + Plus and Standard + Premium + Plus.[33] Each subscription can be bought for periods of one, three or six months with discounts on the longer periods.

5.3.6 Timeline

The timeline in Figure 17 highlights important events in the Match history. Acquisitions are written in green color.
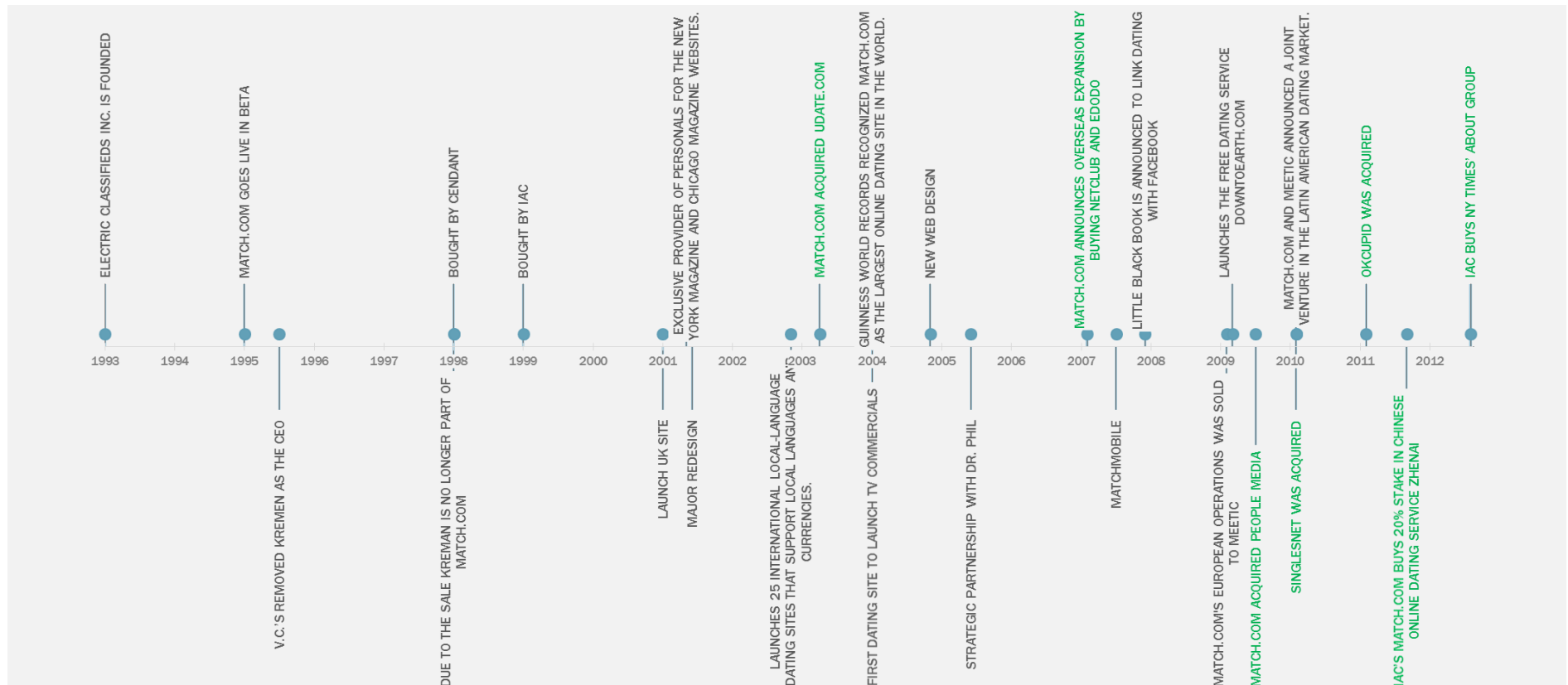

Figure 17 – Match timeline
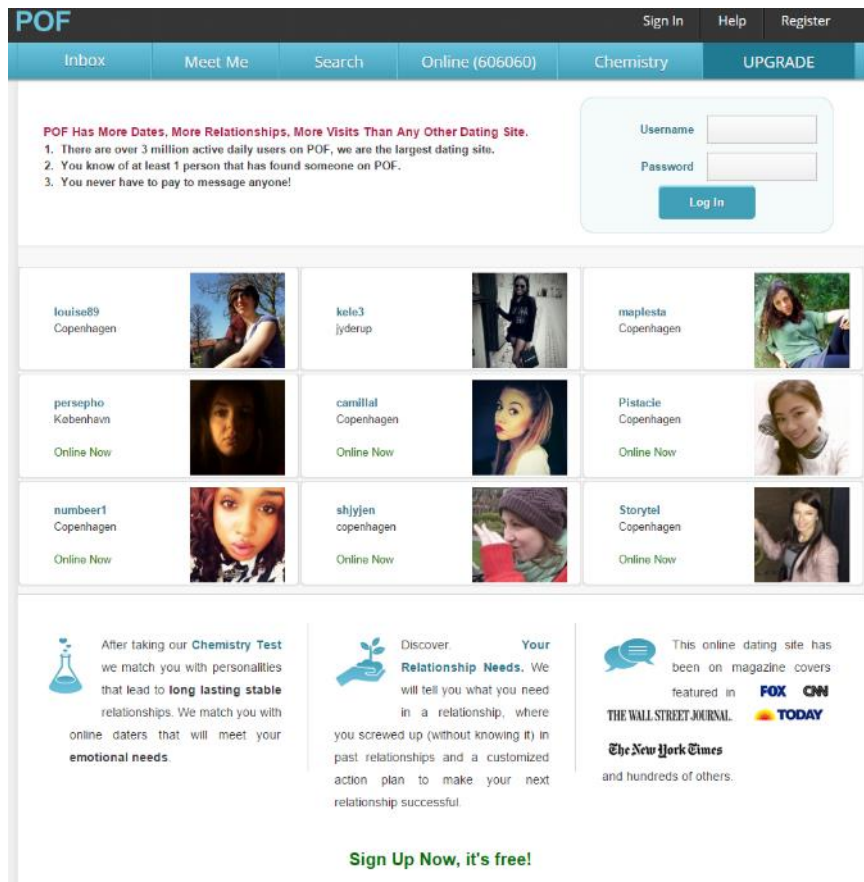
5.4 PlentyOfFish.com

Figure 18 - PlentyofFish Design (2015)

5.4.1 Introduction

PlentyofFish (POF) was formed back in 2001 as Marcus Frind was checking out Canada's then-largest dating site, Lavalife, where he hoped to meet women or at least kill some time.[34] Online dating seemed like a great idea, but he was shocked that the site charged its members a large fee for participating. In his mind, this was unreasonable as it was only a little *"rinky-dink"* site charging money for a service that anyone could easily make. He was sure he could beat them.[34]

He was not the first to have this thought. Since the mid-'90s, there had been several attempts from startups to make a competitive dating site that was free. The problem they had was attracting users and keeping down the cost.[35] Their competitors had more resources due to their subscription models and paid between $30 and $40 in advertisement to acquire a user. A free site could afford to spend maybe 40 cents, thus making it extremely hard to attract users while still turning a profit.[35]

Frind approached this problem with the idea, that he would not compete directly with the industry leader Match or the other giant paid sites. Instead, he created a website that cost virtually nothing to operate and with a target group aimed at people who wanted to try it out without committing themselves too much by taking out their credit card. He found a way to access an untapped market. He positioned the dating service as a place for the paid dating services to spend their advertisement budgets.

Frind released his income earned in 2006 with the new advertisement tool, Google AdSense, to demonstrate how much it was possible to make with the advertisement channel. AdSense was at the time viewed as something only amateurs used.[36] He earned $800.000 USD in total or roughly $10.000 revenue a day.[36] The public release of this information attracted the interest of bloggers and tech authors alike.[37][38][39] The incremental income from the launch in June 2003 to January 2006 is shown graphically in Figure 19.[40] It demonstrates the growth POF went through in both page views and earnings. The graph is made from the data shown in Appendix 2 – POF page views and revenue data.
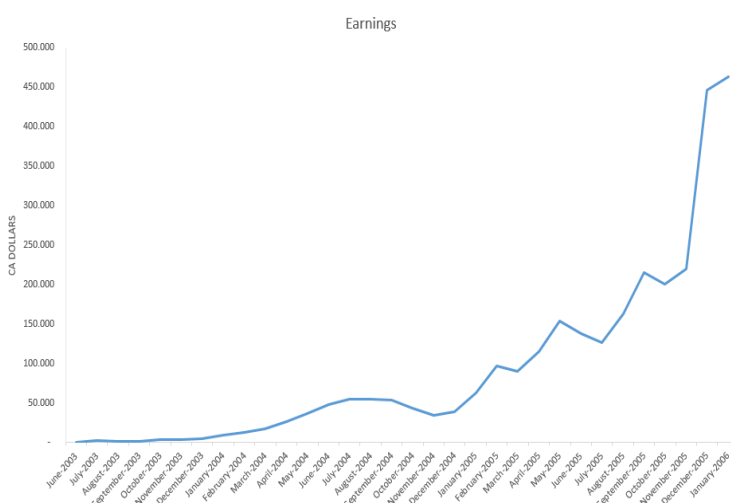

Figure 19 - AdSense Income (2003-2006)[40]

Until 2007, the only person working in the company was Marcus Frind.[41] In October 2008, he had hired three employees, all of them customer service workers who checked for spam and deleted nude images.[41] Frind did the rest of the work himself. The work only amounted to very little according to him: *"I usually accomplish everything in the first hour. Actually, in the first 10 or 15 minutes"*.[41] By the end of 2008, Plenty of Fish was on track to earn $10 million in revenue, with profit margins in excess of 50 percent.[41]

5.4.2   Creating the customer base
In March 2003, Frind ran the first version of POF on his home machine and he had only about 40 members.[43] People were complaining about not being able to upload images and as a result that

was the first feature he added to the site.[43] The design[42] as seen in Figure 20 was simple and the information and features were very limited.

By the end of March, POF went viral and started growing 2% to 5% a day.[43] Frind was developing directly on the live server and he was hoping nothing would crash.[43] However, it was not until the end of June when AdSense was released that he found a way to monetize the site. Until that point, he had a single affiliate program that earned him less than $40 a month.[43] The first month, he earned only $5.63 with AdSense, but he saw its potential.[43]
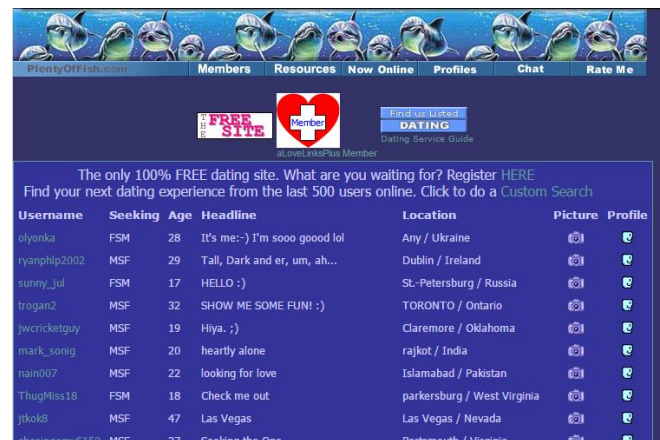

Figure 20 - POF March 2003 Design[42]

Frind focused on how to attract more members to the site and a post dating from September 2003 indicates frustration. He had success but did not know why or how to further improve.[44] He had 10.000 signups at that time.[45] In October, he quit his job, bought a server and created a
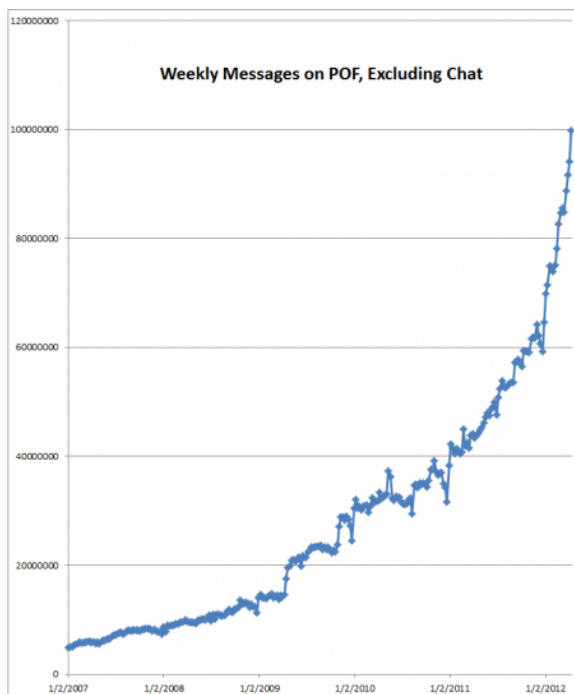

Figure 21 - Message Growth[48]

professional setup. He had been able to operate his site and build up a user base while running it on his home computer for the first eight months.[45]

Today, POF has over 90 million registered members.[46] The page views as of May 2014 are more than ten billion a month.[47] In 2009, the site was doing 2.2 billion page views a month.[48] The private messages exchanged, chat excluded, from January 2007 until January 2012 had increased 67% and was surpassing 100 million messages in total as can be seen in Figure 21. At the same time, the page views had reached 6 billion per month or a little over 100 billion page views per year.[48]

5.4.3 Maintaining the customer base

In September 2006, Frind made a post on his blog with the title *"Mobile Dating Sucks"*, where the general message was that mobile dating was nothing more than a chat-line.[49] Even if you built something for mobile, nobody used it according to him. He was also convinced about the markets being different, in the way that those using the web site were primarily between 30-40 years and those using mobile was below 24 years. Frind said that *"When trying to create a mobile dating site your existing brand is meaningless, the only thing that matters is being on deck at a carrier as it is the only way to get users"*.[49] He was referring to the pre-installed apps (deck) at mobile carriers.

Today, around 90% of all traffic is generated through the mobile app where 10% of that is via a tablet.[50] This means that only 10% of the traffic is coming from the website. A major shift has taken place in the last few years moving further and further away from web to the mobile entity.[50] It is not only the younger demographic that uses mobile. About 50% of all users above 50 years use the mobile app and 10% use the website through the mobile.[50]
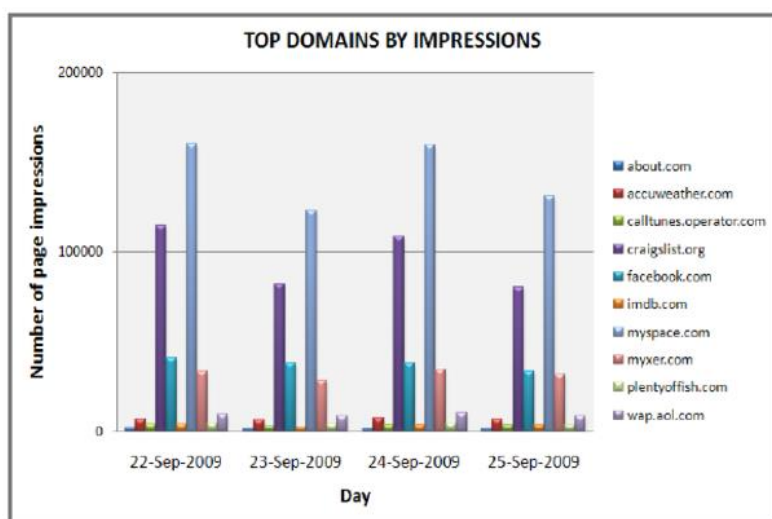

Figure 1: Top domains by impressions

Figure 22 – Mobile Top Domains[53]

The first change of tune for Frind came in October 2009[51] where he saw an article from RWW[52] that listed the top 10 mobile accessed websites. Figure 22 shows that POF is not close to either Facebook or Myspace, but still being able to claim a top 10 spot was an important milestone that prompted Frind to optimize the website for better viewing on a mobile device.[53]

In the end of 2010, POF launched their first mobile apps for iPhone and Android.[54] By January 2012, their free mobile apps had surpassed 300 million monthly visits.[55] It was a testament to the growing popularity of mobile-based services along with how daters had started changing their habits that POF now had an increasing rate of 3% mobile traffic a week. Even the sign-ups had

started to shift more towards mobile and POF now had a 40 percent sign-up rate from mobile in the US.[55]

Frind acknowledged the huge amount of traffic the new mobile services gained, but it was not without challenges: *"Now it's great to have all this traffic, the only problem is no one has figured out how to make similar levels of money on mobile as the web, unless you do some real scammy stuff. So ya it's great to have more traffic on mobile than every other dating app combined in English speaking countries but it doesn't matter much if you can't really monetize it at high levels and it starts to cannibalize your web traffic".*[56] Frind further predicted that if the growth of mobile continued, POF would be 60-70% mobile by the end of the year.

			All Smartphones		
		Media	Average Daily Visitors (000) ▼	Total Minutes (000)	Average Minutes per Visitor
		Total Internet : Total Audience (A…	95,681	243,558,075	2,206.6
		Community - Personals	1,314	1,000,462	203.0
1	P	POF Sites	659	675,172	380.6
2	P	SKOUT.COM	234	122,264	102.9
3	P	ZOOSK.COM	212	63,642	41.3
4	P	Match.com Sites	83	42,728	119.2
5	P	Handmade Mobile Entertainment	82	45,140	182.4
6	P	eHarmony	16	9,853	35.8
7	P	SPEEDDATE.COM	16	28,855	234.0

Figure 23 - ComScore mobile market share[57]

Only 9 months later in November 2012, ComScore released a new report that tracked companies' mobile apps showing POF in the top.[57] As is seen in Figure 23, POF has 67.5% of time spent on all dating apps and 50% market share in terms of daily visitors for the month of

November 2012 in the United States.[57] POF had gone from a web only site to a mobile heavy site in only one year.

5.4.4   Revenue model and pricing scheme

The primary revenue model from early on was based on advertisement income through Google AdSense. As was shown earlier in the case, the site grew in both popularity and income after Frind posted the earnings for the first 3 years. There are no data on how much POF was earning later on with AdSense, but it would have increased since the beginning as the amount of users grew. The problem however for the entire ad industry was the growing use of AdBlock in browsers. The phenomenon was mentioned as far back as 2007 in a NYT piece titled *"Whiting Out the Ads, but at What Cost?"*.[58]

In November 2008, the first attempt at an alternative revenue appeared on POF with the introduction of paid virtual goods in the form of sending a flower, happy smiley face and so on.[59]

Frind himself did not seem overly enthusiastic about the idea: *"Plentyoffish paid goods are up, this will hopefully help us keep some of the users who feel spending money is a sign of quality"*.[59] It did not take more than a month and a half before they were removed with the reason that they were *"not really core to what we are doing"*.[60] However, as other users and sites noted, the implementation of them "seemed extreme".[60] For instance, the cost to send a virtual flower to another member was between $12 and $30.[60]

Having scrapped the idea of virtual goods, Frind set his mind on changing the revenue model to a freemium service in March 2009.[62] The site would still be free and have ads for all members not willing to pay, but it would now be possible to pay for a *"Serious Members Only"* profile upgrade at $9.80 a month.[62] This new membership option would remove advertisements and the user would now be highlighted in gold in the search list as well as having a gold star shown on their profile.[61] Claims to get a 230% increase in chances of a relationship were made as a statistical reason for members to purchase the new option.[62]

The paid *"Serious Membership"* was evolved in September 2011 to be a regular membership with a host of new features and value added such as seeing who viewed your profile, being put on the top of search results and finding out if emails were read. Virtual gifts made a comeback, but was now free through the membership. The price of membership rose slightly to $11.80 per month and the changes and features now aligned POF to be much closer to the other popular paid dating sites with the only, but still significant difference, that users could message each other at no cost.[63]

In June 2013, another iteration of features available for paid members was released. Now free members would not be able to read date feedback, *"hottest girls that reply"*, and viewing extended profiles.[64] New features introduced were now only for paid members such as highlighting in all profile lists and seeing who viewed your profile after you voted on them to signal interest.[64]

PlentyofFish is still one of the most popular dating site on the web in 2015 despite that they have taken many features from the free members and moved to paid memberships.[65]

In January 2011, PlentyofFish and CEO Marcus Frind was involved in a case of hacking, involving a man named Chris Russo. Allegedly, Russo told Frind that Russians were taking over his computer and trying to kill him, that his life was in serious danger and that they were currently downloading the entire member database. At first POF was happy to have the hole closed, but Frind then changed his tune and accused Russo of actually being the hacker trying to extort him. Russo on the other hand claimed he was being a good citizen and wanted to help POF close the hole. He and his team in Argentina were drafting up legal documents to become security experts for POF in the future. That of course never happened and the whole case deteriorated into name-calling and accusations made it a public story.[66]

The parents of Lt. Peter Burks sued POF in 2012 after an advertisement using the image of their son, saying "*Military man looking for love*" that was taken days before he was killed.[67] The family started a website for the Unsung Hero Fund, a website that helps by providing supplies to troops in war zones using the image of their lost son as the banner. It was further inappropriate as he was actually engaged at the time of his death.[67]

Plenty of Fish had since its beginning been easy to use, was free and only required a limited amount of effort to participate in.[68] Due to the broad range of users it attracted and the ease of registration, it allowed them to focus on innovation in regards to retention of users. One of these features were the Intimate Encounters that addressed the segment of users explicitly interested in sexual encounters. However, in a move to distance itself from the negative reputation it had received as a primarily hookup site, Frind removed the feature in May 2013. As an additional action to underline the move away from sexual and inappropriate advances, it was now impossible to message users who were either above or below 14 years from a user's own age. This was mostly directed at the predominantly male portion of users who contacted women much younger than themselves.[68]

On forums, comments and articles the reputation of POF seems mainly negative.[69] A recurring comment is that the free part of the service allows anyone to sign up, so it tilts the user base towards the cheap and less sophisticated segment. A phrase often used is *"POF is like walmart"*[69] leaving readers with images that does not encompass anything attractive, sexy or worthwhile.

5.4.6 Timeline

A compiled timeline of the important events included in the case as well as public available press material from POF.com is shown in Figure 24. It spans from the purchase of the domain in 2001 until the most recent big milestone with mobile traffic reaching 85% in June 2014.
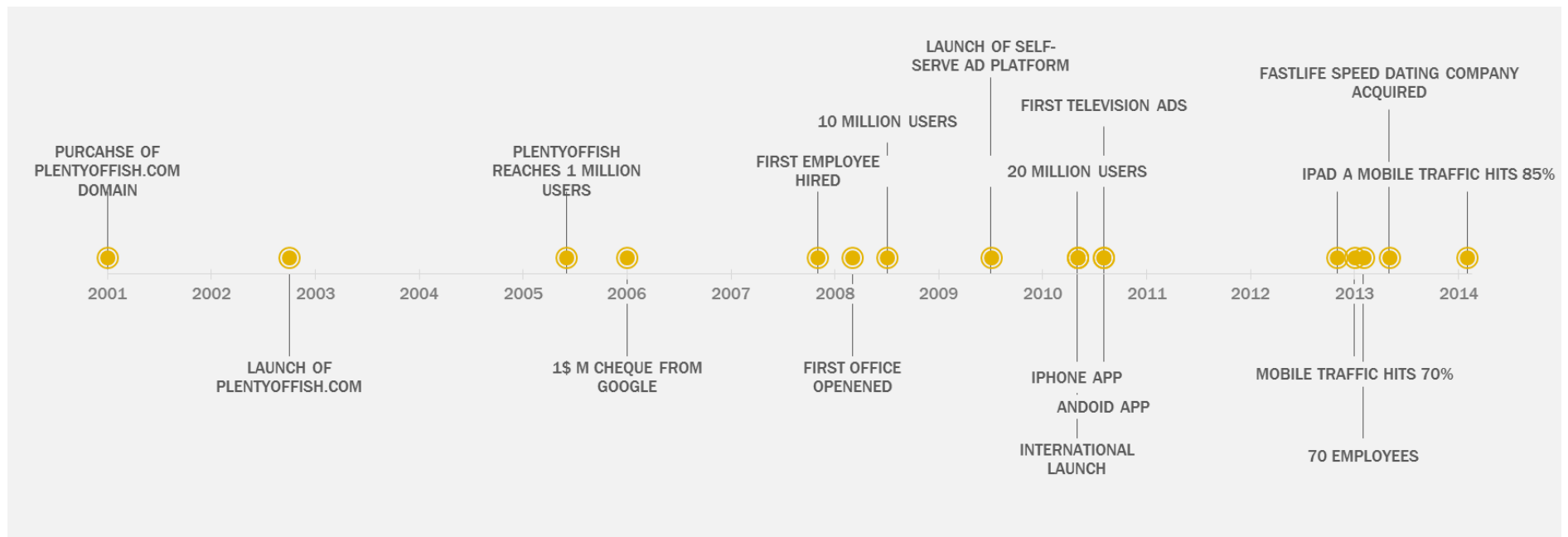

Figure 24 - PlentyofFish timeline
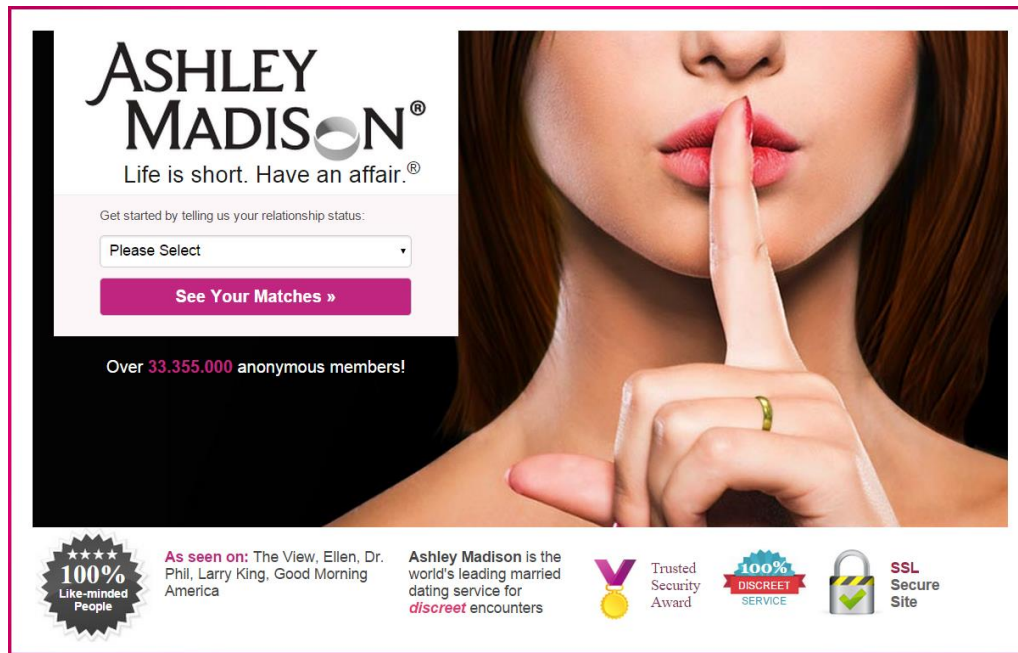
5.5 AshleyMadison

Figure 25 - Ashley Madison Design (2015)

5.5.1 Introduction

Ashley Madison (AM) was the first niche dating site that targeted people's intent on cheating. Darren Morgenstern, who was a 45-year-old high school dropout from Canada north Toronto, launched the site in January 2002.[70] He saw a market for affairs as an alternative to the mainstream dating sites such as Lavelife and Match. He did some research to find any existing dating services providing the possibility for adulterers to meet through real life locations or old-fashioned match services, but none wanted to meet up at a place where a big sign advertised "*Cheaters Come Here*".[70] Instead, by going online, there would be complete anonymity for the users and this presented a business opportunity.

5.5.2 Creating the customer base

In January 2002, Morgenstern invested $10,000 into the site and announced it with small-print ads in the Toronto Star and in a magazine under the classified section such as dating personals. Morgenstern said, *"You didn't need to speak up loud. The people who were looking were looking".*[71] By the end of the following summer, the site had gone from 60,000 registered users to

550,000. Mostly because he was attracting a lot of media attention due to the very controversial nature of the site.[71]

The biggest challenge he faced was how to advertise and brand the site without coming off as a profiteering home wrecker. He needed to broaden the geographical base and came up with an idea to produce a pseudo-scientific infomercial named "*Perspectives on Infidelity*".[72] Morgenstern is presented in the video as a "*down-market version of Tom Cruise*" while standing in a stiff navy blazer and open-collared shirt he is ready to recite historical facts on humankinds disregard for monogamy:[72]

"Is this a bad thing?" he asks the camera. "It's probably not good or bad, just reality." Then he tries to distance himself from the moral relativism he's just espoused: "Do we think that people should cheat? Of course not. Are we encouraging them? No. If your relationship is in trouble, by all means, get counselling and try to repair it any way you can. But if you've already made up your mind…then log on to Ashleymadison.com…. If, after browsing our Web site, you decide to stay in your relationship, well, good for you."[72]

Many of the stories in the media has been about why Ashley Madison is so successful, and what it is that drives people to cheat instead of ending the relationship.[73] In 2004, Morgenstern set out to hear from the source itself and hired two actors, one female and one male, to hear what users of the site told them. For both men and women, it was either because of lack of sex in the marriage, up to two years with no intimate contact, or the answer they all gave that they were just trying to fill a void. None of them wanted to end their current relationships however, either because of the kids or because there are assets, religious beliefs, or other costs. Morgenstern said "*People change, relationships change, circumstances change. There are no absolutes, and you could get to a point in your relationship where it is just monotonous to remain monogamous*".[73]

The site was generating relatively high revenues by 2007 and Morgenstern decided to cash out by selling the site for an undisclosed amount to a Toronto investors group called Avid Life Media with the Osgoode law graduate named Noel Biderman as the leader.[74] The group was more aggressive in their marketing and owning another controversial site, HotorNot.com, they were able to put out increasingly sophisticated ads.[74]

Biderman's first goal was to penetrate the US market.[74] At first, he tried to launch a campaign on the ESPN through some affiliates, but it was promptly shut down by the directors of ESPN for not being family value material. The pullback generated a lot of press coverage for Ashley Madison, which seems to ring true to the old adage that any press is good press.

In October 2007, Ellen DeGeneres made fun of the official motto of Ashley Madison, "*Life is short. Have an affair*" by placing an ad on their Beverly Hills billboard, *"Life is short. Eat a cake"* and *"Life is short. Rob a bank, then go to jail where life is long"*.[75] The female member base increased by 8,000 that day.[75] A similar thing happened when a billboard on New York's time Square with an ad for Ashley Madison was forced to be taken down as the building's owner protested. Ashley Madison received 150,000 new members in that week.[75]

In March 2008, New York governor Eliot Spitzer was exposed in a scandal where he hired a prostitute. Biderman promptly bought a full-page ad in the New York Post where he phrased the ad as an open letter to Spitzer saying "*We Told You So*".[76] It generally said that he could have got away with it, if only he had been smart enough to use Ashley Madison. Later on Larry King Live Biderman expanded on his ad, giving the dating site even more free advertisement.[76] New York is the third-biggest paying location for Ashley Madison, only eclipsed by Los Angeles as the number one and Toronto as the second.[76]

As a test of expanding into the European market to see if they would have the same success as in the US and Canada, Ashley Madison launched in the relatively small Ireland in May 2009 after having been open in a soft launch test.[77] In the first three months, they quickly accumulated 13,000 new users and after eight months, they had 40,000 users with a third of them women.[77] After the success in Ireland, in February 2010 they expanded into the UK quickly amassing 630,000 users where 44% of them was female. [78] The amazing success is according to Biderman that *"British and Irish women are disappointed by their men"*. He even congratulated the reporter on being married for just three months and followed with *"We've recently seen a surge of 'honeymoon members' who have been married three years or less. Trust me, monogamy is dead"*.[79]

Using the same soft launch approach in Australia, Ashley Madison officially launched in April 2010. Biderman commented on a possible unique early adopter situation where about 36% of the installed base were female compared to any city they had encountered before. Still holding to his

opinion that marriage is on its "*last legs*", he used the 5.5 million members to back up his words.[80] The job as the "*King Pin of Infidelity*" was not without its risks, however. As he was arriving in Australia for the grand opening with a security detail, Biderman said that there are plenty of threats against him. He comment on these threats saying: *"Rather than take a look at themselves in the mirror and wonder what's gone wrong in their relationship that would lead a partner to stray, people have fired off emails accusing me of being responsible for the breakdown of their relationship"*.[80] There was not the same outcry in Australia as in other countries yet, and there were at this time 40,000 members in total.[80]

Ever expanding into new areas, Ashley Madison moved into South Africa June 12 in 2012 and by the beginning of August, they had 96,000 members.[81] Interestingly enough the user segment showed a drastic difference compared to the other regions. South Africa was the first country that did not have a typical cheater profile. Biderman stated that South African cheaters could not be put in the regular boxes and categories, instead: *"of the 23 countries. […] Data proves that South Africa infidelity ranges across the full spectrum of ethnicity and spiritual conviction"*.[81]

Other areas Ashley Madison was looking to expand into were Asian territories. In August 2013, they opened up in Hong Kong under heavy media awareness. This was particularly because the divorce rates had long been high and during 2012, they topped with the worst in many years. These numbers fell during 2013. The first drop in seven years, and various groups condemned the website as it could cause rates to increase again.[82] One month after the launch, they had 80,000 members, the highest launch rate per capita of any previous area.[83]

In November 2013, Ashley Madison was supposed to launch in Singapore. However, the Media Development Authority (MDA) in Singapore blocked them due to massive protests from very vocal citizens.[84] A Facebook group of more than 26,000 individuals, who had been against the launch in Singapore, had written open letters to authorities in power such as the MDA to prevent the entry into their country. [85] Ashley Madison had been aggressively present in the media before the launch date. When asked why they did not enter more calmly, Biderman responded that he had been successful 34 times when making a new entry into another market, so there was no real reason to believe it would not work again.[86] Despite the setback in Singapore, at the end of the year Ashley Madison had generated $125 million in revenues for 2013.[87]

In May 2014, Ashley Madison opened up its Hebrew version in Israel. Having achieved 25 million members worldwide, it attracted 35,000 Israelis without even running any ad campaigns.[88] As with other areas, Israel had its distinct different pattern of behavior. One of them was that the users were generally younger, 80% are less than 40 years old compared to the global average of 40. Israel is an "*entrepreneur center*" and this became apparent as well, as many men registered with a profession of entrepreneurs instead of the usual IT workers, lawyers, government employees or physicists.[88]

5.5.3   Maintaining the customer base

Ashley Madison continued to make headlines in the media. In 2009, they had 3.2 million members in total, where 70% of them were men and 30% women. Of those that were active paying users, there were a 1:1 relationship between men and women. Later on this number changed to a 2:1 and then 3:1 ratio as the user base grew. The men are almost all in their late 30s to early 40s and married.[89] The women were a bit younger and fall into three categories: *"the suburban housewife who is seeking validation of her desirability; the quintessential mistress who is not interested in a family life but wants things like trips and dinners out; and women who've been married only a short time and suddenly wonder what they got themselves into"*.[89]

When the average woman was in her late 20s or early 30s and with approximately two years of being married as opposed to men's 7 years. Ashley Madison is very female-friendly with many willing men, ready to contact new women as soon as they sign up *"Women have an easier time here. They can sign up and have 20 men on their door no matter their age or appearance. Men are lower-hanging fruit"*.[90]

Ashley Madison turned to the biggest advertisement event of the year in USA, the Super Bowl in 2009. Noel Biderman was interviewed, since the ad was banned from the official NFL Super Bowl Game Program. He commented that: *"I find the rejection to be ridiculous given that a huge percentage of the NFL's marketing content is for products like alcohol, which they sell in their stadiums, promote on their air and have in the game program. That's a product that literally kills tens of thousands of people each year"*.[91]

Figure 26 - Super Bowl Ad[91]

The ad can be seen in Figure 26 and is relatively mild compared to some of their other ads. One ad for instance had a man waking up next to a fat woman with the text *"Most of us can recover from a one-night stand with the wrong woman, but not when it's every night for the rest of our lives"*.[91]

Apparently, it was not just that they got the ad rejected that motivated him to continue pursuing this course, but also that many of their users were viewers of NFL games: *"We don't intend to let this pass. The NFL fan base is our core audience and we will find a way to let them know about the existence of this service and let them decide if it is something for them"*.[92]

However, even if Bidermans claimed that their core user base were NFL fans, it did not stop Ashley Madison from promoting their brand on conventional places. The Toronto Transit Commission's (TTC) advertising review committee had backtracked on a December 2009 deal that would have up to ten streetcars painted the same way as the test car in Figure 27.

Figure 27 - TTC Ad[93]

The TTC was apparently cash-strapped and had been negotiating a $200,000 contract with Ashley Madison before the media picked up the story.[93] When the chairman was interviewed, he was now saying that the TTC was *"not likely going to run the ads"*.[93] As usual, Biderman was not going to let it stop him: *"The TTC and its riders additional payment on top of the original ad charge and giving the public a fare reduction and a chance to have a say about whether the ads should be allowed. Anyone who rides an AshleyMadison.com wrapped Street Car starting in January will not have to pay the 25 cent rate hike plus they will get an additional fare reduction"*.[93] The result would be that commuters would only have to pay a $2.50 cash fare.[93]

Ashley Madison made two more attempts to move into mainstream brand avenues in 2010, but was once again rejected. The first was in February where Phoenix received a bid for renaming their Sky Harbor International Airport to the Ashley Madison International Airport over at five-year period. They would have received $10 million and the offer came at a time where budget cuts would result in employee layoffs.[94] The other bid was for Meadowlands Stadium, the home of the New York Giants and the New York Jets that received a $25 million offer for a five-year Naming Rights. This offer was also rejected.[95]

The company behind Ashley Madison, Avid Life, reported $60 million in revenue and $20 million in profit for 2010 with almost all of it coming from Ashley Madison and its 8.5 million users globally paying for their services.[96]

In a bid for press coverage, Ashley Madison proposed Virtus Roma in October 2011, who is a prominent Italian League professional basketball club, with a €1.5 million sponsorship for bringing back Andrea Bargnani who had been sold to the NBA club, the New York Knicks. In catholic Italy, something like this does not go unnoticed and the proposal elicited a response from both The Vatican and Opus Dei denouncing such a union as a cooperation with evil itself.[97]

Since Ashley Madison launched in South Africa in 2012, by their two-year anniversary in 2014, they had acquired 205,000 members. Dr. Eve, a psychiatrist who had been working with Ashley Madison said that *"In the last 18 months I have been privileged to be utilizing the database of AM for my research into Cyber Infidelity. I have seen the huge impact it has had on the lives of South Africans. My clinical practice is filled with people's stories of experiences of infidelity on AM. AM has changed how we think about infidelity and marriage. And surprisingly my respondents feel this change is positive"*. She also released an official "*Cheat Sheet*" for 2013, showing that there were an almost equal gender split with 58% male and 42% female users. The members were also predominately white with around 55% Caucasians and with most members in the 30-39 year range. The male members had four affairs, while the females had two.[98]

There are around 60 million married couples in the US. 13 million have created an account on Ashley Madison as of May 2014.[99] Of these around 75% have indicated they are married or in an otherwise committed relationship. The reason to why there has been so many articles about Ashley Madison seems to be because it provides previously unobtainable information: *"For the*

first time that I'm aware of, we have the ability to peek in on people having an affair, and if that doesn't thrill any researcher interested in human sexuality, I don't know what could".[99]

December 2014, Ashley Madison had to shut down the Irish office. This was not due to a lack of members, because there was 125,000 of them, but due to those people who had the qualifications to run the office would simply not work there. Biderman contributed this to the religious nature of Ireland, and that he may have been naïve when he first approached the first law firm: *"It was my naivety. I remember the first law firm I approached [who turned down the business on moral grounds]. I said but you are lawyers. You defend criminals. I didn't realize the religious vein ran so deep".*[100] He stated that *"candidates who came to the company were not of the necessary caliber, and those who were would not come to interview".*[100]

The age of free dating apps are having an impact on most online dating services.[101] Ashley Madison however is still doing good with a $125 million gross in 2014, up 45% from $78 million in 2013 and almost as much as tripled since 2010.[101] This will amount to roughly $55 million pretax profits. The site had 31 million total users during its lifetime with 6.8 million active users who has logged in since the previous 90 days since November 2014. Biderman commented on the launch of Tinder as a new rival, and pointed out that Avid Life sold HotOrNot.com when Apple app store rejected them: *"Rating people was offensive; swiping them is okay, I regret that I didn't think of it first. Congratulations to them".*[101] However, the setup of Tinder with its young members logging on via Facebook and Ashley Madison with its older married users would not really make them competitors according to him: *"Forty- to 50-year-old married men are not going to log into an account on Facebook".*[101]

5.5.4   Revenue model and pricing scheme

You can sign up for free and search for members as well as view profiles like most other subscription dating sites including Match. Men on the site initiate contact 99.6% of the time and thus the revenue model for Ashley Madison is shaped thereafter. Women pay nothing and men are charged five credits for each contact they make with a woman or if you want to use the chat feature, they are charged for the time used. It is typical for men to spend between $200 to $300 per year on the site. In addition, you can delete your profile completely from the site, for an extra $19.[102]

In order for a man to initiate contact, he must first buy credits. These credits are used to perform actions on the site. There are three different packages you can purchase: The introduction package that offers 100 credits for $49. The elite status package that offers 500 credits for $149. The last package is special and called "*Affair Guaranteed*" and costs $249. It guarantees an affair or the money returned.[103]

Women can send a message to men indicating their interest, but men cannot do the same to women. Also if non-paying users have not actively opted out of the "*Ashley's Angels*" feature the sites Terms and Conditions gives Ashley Madison the right to send computer generated messages from fictional profiles that *"are NOT conspicuously identified as such"*.[104] Responding to these messages for men costs money. Ashley Madison claims this is *"to provide entertainment"*.[104]

5.5.5   Reputation

Ashley Madison uses unconventional methods to promote themselves that has resulted in very strong opinions about them and at the same time made them well-known. They have created a website supposedly in support of marriages called MyMarriageMatters.org, where a divorce lawyer in a 30 second clip talks against the infidelity site Ashley Madison.[105] In the background, a frame representing a screen is showing all the great things that is provided by them, such as free profiles, that they provide an affair guarantee for anyone and that an affair can save your marriage.[106]

Many dating sites have received several comments from users believing that many of the profiles they have are fake.[107] In Ashley Madison's case that might be true as illustrated from their statement with "*Ashley Angels*". However, in 2013 a Brazilian immigrant living in Toronto filed a $20 million lawsuit plus $1 million in punitive damages for "*unjust enrichment*" on her expense.[107] She was asked to create 1,000 fake female profiles in order to lure men to Ashley Madison's new Brazilian site and she was given three weeks to complete the task.[107] It took almost two years for the matter to be settled, when the court threatened to dismiss it with cost, noting that no actual trial date had been pushed forward of either party. The two parties finally agreed to settle without costs in January 2015.[108]

In plenty of cases, Ashley Madison was blamed for ending marriages. In one case from 2012, a man from North Carolina sued for alienation of affection/criminal conversation. It is an old law

that *"[…] awards punitive damages when a marriage fails and someone other than the husband and wife is to blame"*.[109] In other words, it is possible to sue both Ashley Madison as well as the third party with whom the wife cheated with. Schindler said that *"[…] the love and affection he and his wife shared 'was alienated and destroyed by the defendants.' He asks for damages of more than $10,000 under two claims: alienation of affections and criminal conversation, which is legal shorthand for extramarital sex"*.[109] However, a year later Schindler had still not served Ashley Madison with a suit and was officially dropped as a defendant. In 2014, the jury decided that the defendant had indeed criminal conversation with Schindler's wife, but declined to pay any damages.[110]

5.5.6   Timeline

In Figure 28 a compiled timeline is shown of important events from the launch of Ashley Madison in 2002 by Morgenstern until the
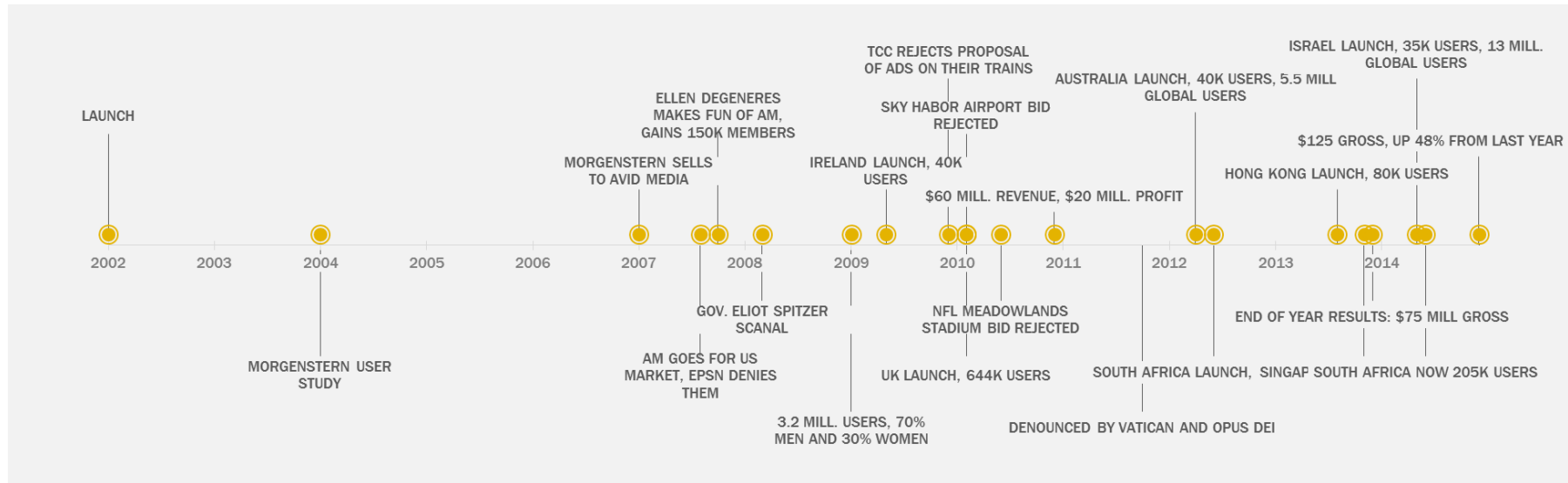December 2014 revenue numbers.

Figure 28 - Ashley Madison timeline

5.6 Tinder

Tinder shows you interesting people nearby

If someone happens to like you back...

It's a Match!
You and Allison have liked each other.

Send a Message

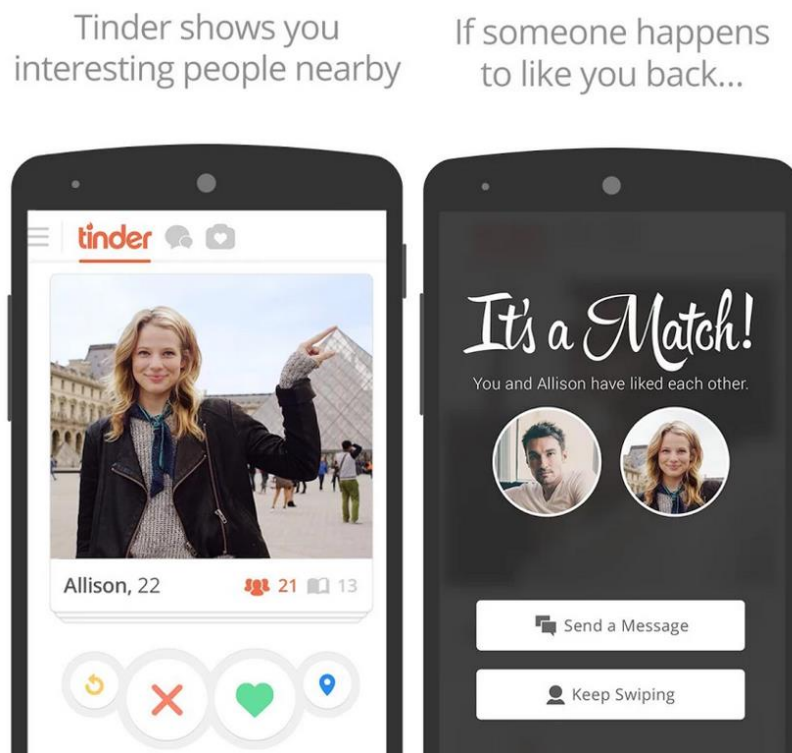Keep Swiping

Allison, 22   21   13

Figure 29 - Tinder Design (2015)

5.6.1 Introduction

Originally incubated at Hatch Labs, a Los Angeles-based startup accelerator, Tinder was launched in August 2012 by Sean Rad, Justin Mateen, and Jonathan Badeen. The dating service was created as a mobile-only product with the goal of utilizing their users' social graph with Facebook.[111] The app analyzes a user and finds potential matches based on their geographical location, number of mutual friends and common interests. Tinder allow members to limit their matches with GPS and only show matches that are within a certain range of their current GPS location.[111]

Members are presented with an image of a match and can then like or pass by either swiping or tapping the image. When two members swipe each other, the app will notify them as having been matched. As an example, a member is not notified when another member swipe their picture, the algorithm will instead include the swiper in the other member's image stream. This allow people to indicate an interest without the pressure of being rejected.[111]

In general, the founders had the experience that other dating sites offered too much rejection.[111] Other dating sites focus heavily on profile content that according to Tinder does not tell much

about a potential match and result in a ton of message spam. Males tend to be eager when looking for a match and send generic messages in waves to up to 200 women at once where only a couple will respond. It is all a waiting game with plenty of rejection and Tinder believes that this is a bad user experience. On the other side, the women are flooded with messages and often overwhelmed or creeped out by strange messages.[111]

The primary incumbents like Match, OkCupid and PlentyofFish, require you to fill out forms and questions and take a lot of time to get started with and use in general. Tinder caters to a younger demographic, the mobile generation, with fast instant signups as well as no time wasted on filling out superfluous information.[111]

5.6.1.1   The cards and swipes approach

There are a lot more limited amount of screen space to provide information on mobile screens compared to desktop screens. Tinder's approach is to display a *card* with only the image, age, number of pictures viewable, and shared friends or interests you and the other member has. A right swipe signals interest and a left swipe is a no. After a swipe, it is on directly to the next card. These snap decisions based on little information is what makes up the core of Tinder's functionality. An important difference is that members perform a purposeful action when swiping left or right:

"*In general, on a browser or on a phone, you scroll and stop, and then have to go up or down to position and digest the content. With swipes on Tinder, the act of navigating through content is merged with inputting an action on that content*".[112]

Tinder co-founders Rad and Jonathan claim the innovation of cards and swipes came from looking at a bunch of stacked polaroid's and playing cards and that the early users where trying to flip over the top of the virtual stack of cards when using their app. The swipe was added only a few days after the launch due to this.[113]

Many companies that previously relied on information streams such as Facebook and Twitter has adopted part of the card philosophy. For instance Twitter, while still representing the stream in the classic scrolling way, has opted to integrate the cards approach into their normal post as seen in Figure 30. [114]

Indeed, it seems like everyone in social is moving to cards in some form as it has shown itself to be a very simple and intuitive interface to use.[115]

Rad and Sarver argues that combining the card metaphor with swipe action takes it to the next level.[116] The information aspect of it is great for devices with small screen sizes, but by combining it with swipes, it is interactive and engaging for the users. Sarver said that *"Every swipe is engagement data"* and this opens up possibilities for on-the-fly modifications based on how the user reacts to different information.[116]
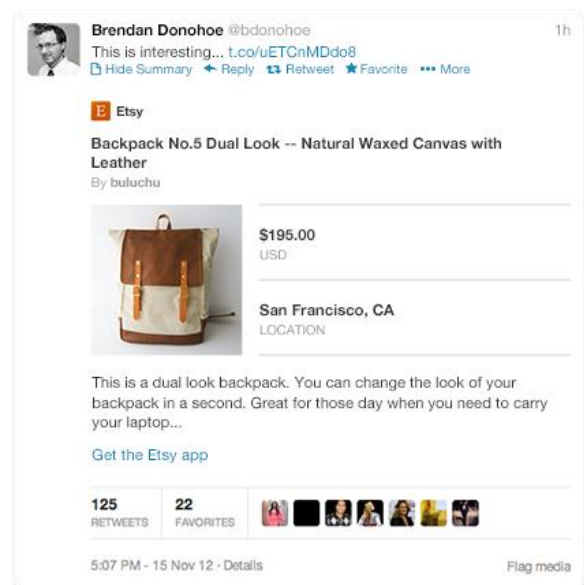
5.6.2   Creating the customer base

Tinder piloted the concept on a few college campuses, where they hosted frat parties at the University of Southern California. Admittance was based on having downloaded the mobile app. It was a massive success where hundreds of available singles in a geographically dense area signed up at every party. The key for Tinder was the concentration of the users at the same place, as the tinder app works on a radius based matching with no other parameter than the profile picture.[117]

"It happened around January. We had been picking up on college campuses, then everyone went home and told their cousins and older brothers and friends about it, and all of a sudden Tinder started growing like a virus".[118] Just by catering to a few college campuses, Tinder had by January 2013, in less than two months made above one million matches and with members having completed 35 million profile swipes.[119]

Word of mouth was essential as everyone were talking about this new smart, easy to use and effective mobile app. Also attributing to their growth was that *"normal persons"* were starting to use it, such as people who were not overly obsessed with gadgets or early adopters of technology and apps in general.[120] Some of the reasons for this are that tinder feels like a game instead of a dating app and therefore have little stigma, non-cumbersome and actually fun to use if not outright addictive.[120]

For the co-founder Sean Rad, one of the biggest issues in the early days was that even though they had designed the app to grow, it was still a prototype and with the growth they were seeing, it became difficult to maintain the current system as well as building a new better version:

"…imagine you're flying at 100 mph and the engine is breaking while you're in midair, and you're fixing that engine while you're building a new one in the air. It's a very challenging and emotional thing".[121]

The co-founders received seed funding from IAC and was looking towards raising further funding from a series A later. As IAC maintained first investment rights following their seed investment, they later became the sole investor in the series A round and raised what was rumored to be in the millions.[122]

In May 2013, Tinder had served 50 million matches and users had made 4.5 billion swipes.[123] This stems from the high engagement Tinder has compared to the common trend among other popular
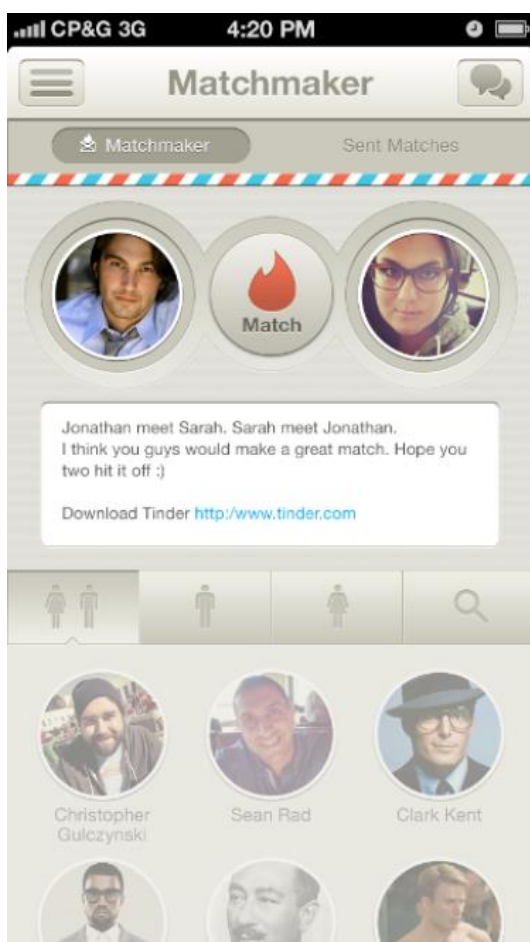

Figure 31 - Tinder Matchmaker[126]

mobile apps. About 50 percent of their users open the app once a day and approximately 75 percent open it once a week with a remaining 85 percent using the app only once every month.[123]

One of the new features introduced in May 2013 was called *"Matchmaker"* and worked as an introduction tool.[124] It allowed a user to introduce two of their Facebook friends to each other without revealing personal information as can be seen in Figure 31. They were testing it with a small sample of users to see if it would catch on. They were observing positive response for the 100 testers with nearly all of them making multiple introductions.[125]

It was Tinder's hope that the feature would extend beyond romantic suggestions and become something more of a tool to suggest any kind of connection.[126] As an example, the Cofounder and CMO Justin Mateen

used it to introduce Rad to a person that could get him a good deal on a watch and it was very helpful in integrating new hires within the company.[126] Tinder had at that time not made a complete commitment to be a dating service only, and were toying with new and alternative possibilities. Rad stated, *"It's a very natural extension to say 'We've been doing that for relationships. Now we're going to start doing that for your business life'".*[126]

One of the problems with introducing users not necessarily registered on their site is that those friends you select might not want to be introduced at all. It would be a very good idea to check with said friends before including them in any matchmaking agendas.[127] However, the feature was never rolled out and was phased out after the testing period concluded.

As tinder was starting to focus more on evolving the product as the initial growth and scalability issues were behind them, they looked towards the international market. In May 2013, 15 percent of all users were from outside the U.S., with high adaption from countries such as Canada, Australia, Brazil and Ireland.[128] Tinder was setting their sights on other international destinations where they had to develop additional language supports, make targeted marketing and hire local agents for each of the countries.

That is not to say they were not focused on growing their own market in the U.S. as was seen with the partnership they did with the USA Network for the TV-show Suits in July.[129] It was a quid pro quo arrangement where no money were exchanged between them. For Tinder's part the first match when users logged in, would either be the male lead Harvey Specter or the paralegal Rachel Zane. If the tinder users swiped right one of the characters they would be given access to special exclusive content only available on Tinder. In return, USA Network would promote Tinder on-air during the show and through media channels.[129]

In august 2013, Tinder had spread further and users had swiped over seven billion profiles and served over 100 million matches, and they were adding 1.5 million matches per day. Up until that point, it had been iPhone only, but on August 15, Tinder released their Android app to increase their market potential. They decided not to release the new app straight away but instead make a landing page for the new app, where users had to make 1 million requests before it was released. When they reached 800,000 requests, they decided to publish it anyway.[130]

Still wanting to be more than just a dating app, Tinder made a major revamp with version 3.0 in late November 2013. Now it was possible to create lists of users and organize them according to for example type of friends, locations or events. Eventually the goal is for Tinder to be able to create dynamic lists automatically based on its relevancy algorithm and other user preferences, location and interests.[131]

The new version added an internationalization aspect to tinder by supporting 24 new languages. Tinder saw 400 million swipes a day and 4 million matches a day, which was up from 350 million swipes and 3.5 million matches in October 2013. [132] The iOS app is also hugely popular and have been stable around the #10 rank in Lifestyle (US) and #100 overall for about a year.[133] Even with these numbers, Tinder still has a focus on growth instead of monetization.

When the winter Olympics at Sochi were held in February 2014, Tinder saw a 400% day-over-day increase in new members located in Sochi. Sean Rad said that the numbers now figured in the thousands and that *"We didn't have a lot of activity in Sochi before the Olympics, in the last week, though, the host city became one of those areas for us that have great penetration and usage"*.[134]

With an overall great growth rate as well as surges for specific areas such as that seen in Sochi, Tinder was by the end of February 2014 doing 750 million swipes per day and 10 million matches, up from 5 million in December 2013.[135]

In a bid to attract high profile users, Tinder introduced verifications for celebrities and other high-profile users. A verification gives a visible badge to show that this person actually is the real deal. Previously famous people received very few matches as most people assumed it was a fake account. Due to Tinder's location-based search method, they saw a pattern where users went to places where they knew a famous person was supposed to be in the hopes that they would match. For instance, being matched with a sportsman during the Sochi games or an actor nearby the Dolby Theater on Oscar night.[136] By March 2014, Tinder reached 800 million swipes per day and had matched 1 billion users overall.[137]

5.6.3   Maintaining the customer base

On April 11, 2014, former Facebook executive Chamath Palihapitiya sold his stake in Tinder, which he had accumulated via his investment in Xtreme Labs, when the mobile development group had previously helped Tinder in exchange for equity.[138] This secured IAC even further control.

The numbers themselves are in question, as the specifics of the transaction were not revealed to the public. It was inaccurately reported that Tinder was worth $5 billion in valuation and that Chamath had sold 10%. CEO of IAC's Match Group Sam Yagan told Forbes that it was *"nowhere near the truth"*.[138]

When TechCrunch contacted Yagan, he added *"[…] the numbers that have been reported in all of the press reports around the transaction are incorrect"*.[139] Business Insider reported the valuation to be closer to $500 million, which would mean that Chamath would collect around $50 million.[140] However, sources close to the transactions tell that while the $500 million valuation is closer to the truth, Tinder had a different valuation in the exchange.[141] Finally, Chamath came forward on Twitter with an official statement saying, *"My Tinder sale for $500M is inaccurate. I sold my stake but value was much less. Thx @samyagan for official IAC pos'n. #wishfulthinking"*.[142] However, still not willing to reveal any actual numbers according to Forbes.[143]
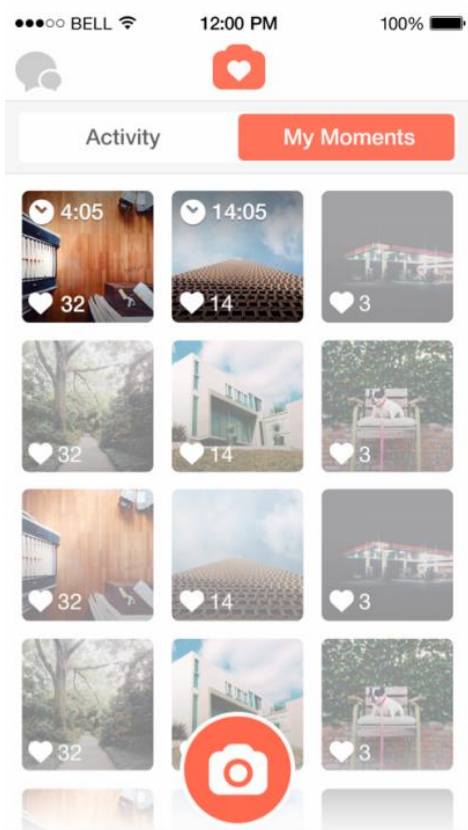

Figure 32 - Moments[144]

In June 2014, Tinder was approaching 2 billion matches.[144] One of the challenges was that members were making more and more matches and it was becoming difficult to get to known the other people they connected with.[144] Tinder introduced Moments to solve that problem as can be seen on Figure 32.

The concept of Moments is that the user snaps a moment photo via the app. The photo is broadcasted to all matches as a way to share a special moment.[144] The matches can swipe left or right in the same way they do with profiles. The user can see what matches liked their moment and start a chat.

As an added incentive, users who take moment photos appear at the top of the matches list. The photos have a limited time that they remain viewable and after 24 hours, they will disappear from the matches' moment list.

The reason behind making moments temporary was that they wanted to make it *"[...] less daunting for people to share these moments and the ephemeral nature of these photos allows for that"*.[145] Rad has repeatedly stated that Tinder can be used by anyone, not just those looking to date or hookup: *"just because you match, doesn't mean you need to date that person; you could match with a friend who you want to share a moment with"*.[145] He further claims that people who are traveling to new destinations is matching up on Tinder to receive local advice.

In order to keep growing, Tinder repeatedly thought about obtaining funding from outside IAC. In September 2014, there was talk about Tinder raising from Silicon Valley venture firm Benchmark, who invested in companies such as Twitter, Uber, Snapchat and Instagram with a valuation above $750 million and going as high as $1 billion.[146] Matt Cohler has a background coming from Facebook and LinkedIn, and he has invested in Instagram, Dropbox, Asana, Zendesk and Domo. The reason why this would be attractive, even considering that Tinder currently had an internal source of funding was, that it would give Tinder independence from IAC and allow to do things their own way. The problem however was the structure of the company and IAC's deep control could hinder such an investment.[146]

However, due to Benchmarks willingness to accommodate IAC, an agreement for a limited investment structure was reached by the end of October 2014.[147] Benchmark obtained equity stake in Tinder in exchange for Matt Cohler joining the board of directors. No actual money was invested in Tinder and IAC remained the substantial and controlling entity. Without giving an exact amount, the stake obtained by Benchmark is apparently a small one, simply traded for the time and expertise of VC Matt Cohler. It gave Tinder a considerable valuable partner to help expand the business. Sam Yagan, the CEO of Match Group and a director at Tinder, said: *"Matt will complement Sean's proven product leadership and the expertise in the social and dating categories we already have on the board. I'm confident Benchmark's involvement will help Tinder achieve its huge growth potential and am excited about continuing to build out the Tinder team"*.[147]

Approaching 50 million active users, Tinder claimed people log in to the app eleven times a day on average. Of those eleven times, men spend 7.2 minutes during a single session with women topping them at 8.5 minutes. This adds up to 90 minutes every single day.[148]

In November 2014, 7park released a chart with the relative market share between some of the big dating sites.[149] Figure 33 shows an extreme growth curve for Tinder and a steady decline for the other sites. However, some notable sites are missing from the chart, such as PlentyofFish who is the second largest mobile dating app.
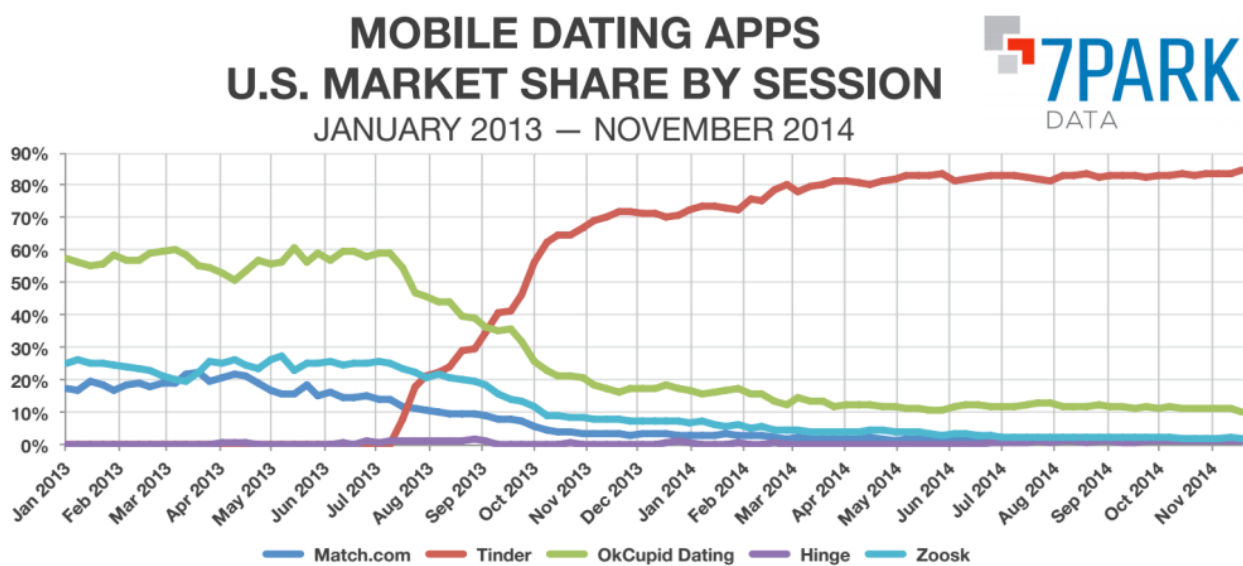

Figure 33 - Mobile dating apps U.S. market share[149]

The very first acquisition for Tinder was in January 2015, where they bought the messenger app, Tappy.[150] The concept for Tappy is very close to Tinder Moments. A chat app allowing users to send images to each other or groups of people and then start a chat based on that image. The images are also ephemeral in that they expire after 24 hours just as in Moments. The reason behind this acquisition is one of both product compatibility where they should be able to import the things they need, as well as an acquisition of top talent to the Tinder team.[150]

In January 2015, Tinder had 1.5 billion swipes and 21 million matches done every single day, and that puts the total amount of matches past the 5 billion mark. It was only the past year in March 2014 that Tinder was at 1 billion swipes and 12 million matches a day.[151]

5.6.4   Revenue model and pricing scheme

From the beginning in 2013, Tinder was thinking about new ways to monetize the dating service, and every day they shelved them again.[152] Their focus were first on the product and how they wanted to perfect *"Matchmaker",* before focusing on how to earn money. If Tinder's goal is to meet new people, then their revenue model should help them facilitate this by using in-app purchases. They can do this by charging for new and better features added. One thing that they will not monetize is the general core of the product or something that disrupts the user experience by creating a new paywall. The aim is to only introduce new features that will charge for the added value that they entail.[152]

In March 2014, Greg Blatt talked about monetizing Tinder with revenue from ads. Having great insight into the dating business as the chairman of IAC and one of the main figures running Match, Blatt said that *"IAC doesn't want or need to turn Tinder into a giant money-maker yet, but it will begin experimenting with monetization ideas 'soon'"*.[153]

Interestingly enough Tinder had already experimented with ad-like activities on its service, though that did not bring them any kind of revenue. The first was with fake profiles for The Mindy Project actors Mindy Kaling and Chriss Messina along with information on how to watch the show on FOX. After that came the TV-show SUITS from USA Networks doing the same thing. It was a precursor test to see how their users responded to external information and how that affected their user experience.[154]

No ad system were ever implemented. Instead, by the end of October 2014, Tinder announced during Forbes Under 30 Summit, that they would launch a premium service in early November.[155] This would effectively move them to a freemium revenue model and finally allow them to start monetizing some of those millions of users. Most important to their success was that they would not change what was currently free in the app, but only start billing new exclusive premium features.[156]

Unable to follow through on their plan to launch the premium services in October, Tinder instead started testing different pricing models for different users in many countries to understand what users would be willing to pay.[157]

Figure 34 - Undo button[158]

The features themselves were not revealed until in early November 2014 and would only have two in the beginning.[158] The first was the ability to undo a previous swipe. It was a common problem for users quickly swiping though tens if not a hundred profiles to accidently swipe too fast. A millisecond later, they register that they were interested in the previous person after all.

The new undo and location buttons are located as new additions in the bottom of the screen as seen in Figure 34.

The second feature was called Passport and was the ability to allow the user to change their geo location to something other than the phone GPS. This is ideal for frequent travelers or for vacation goers, as this would allow them to start matching up with other members where they are going and set up dates in advance.[158]

After pressing the location button, the options in Figure 35 will appear allowing you to either select or search for the location you desire.
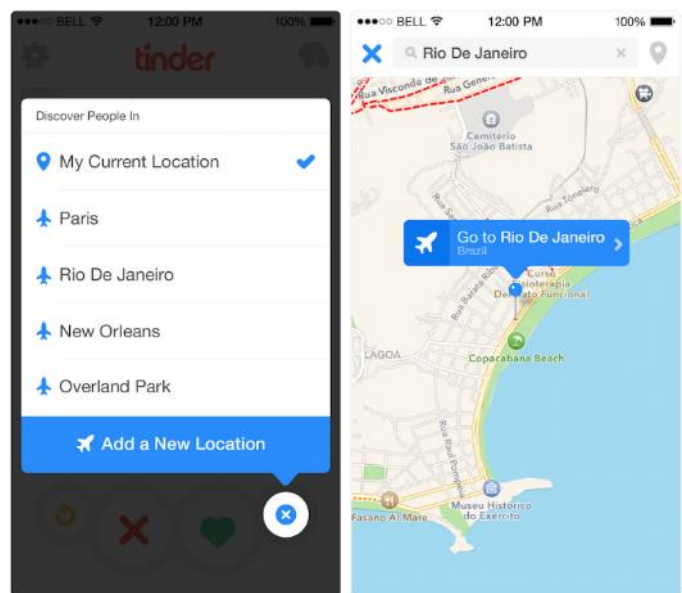

Figure 35 - Passport feature[158]

By subscribing to the premium service, Tinder Plus, members are able to turn off ads. No ads has yet been added but they are to follow soon.[159]

Another feature that Tinder experimented with was a limit on how many swipes users were able to do, and then let the premium subscription allow for unlimited likes.[160] Members would get 100 likes per day and after the 24 hours were up it would automatically refill unless you opt in to buy the premium as seen in Figure 36.
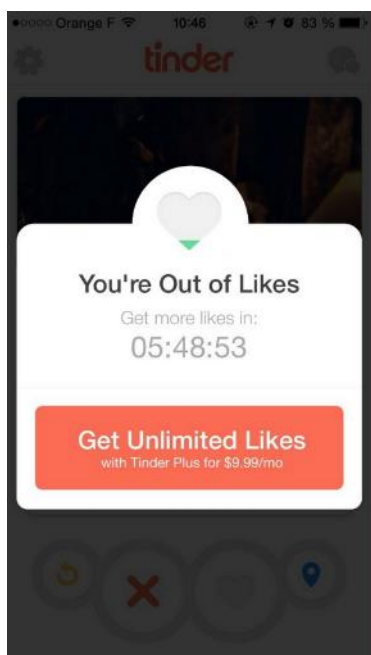
Figure 36 - Unlimited likes[160]

This addition seems, at least for now, to have been postponed in the first version of the premium membership. If they did implement a limit on the amount of likes possible, it would go against the previous statements that they would leave the experience, as it is now, free and only charge for additional features.

Tinder has opted for differentiated pricing between users, not just based on geography, but also based on the age of the user. A user under the age of 30 will have to pay $10 for a month of Tinder Plus and if you are over 30, you will have to pay $20.[161]

However, the pricing model is even more complex than that. The lowest paying members are in emerging countries where it will drop as low as $3 a month, while the most expensive is in countries such as the UK with $23 a month.[162]

5.6.5   Reputation

In a security breach in the Tinder API users' birthday, physical location and Facebook ID were sent in clear text. Sean Rad said, *"We had a very, very, very brief security flaw that we patched up very quickly"* and further that *"We were not exposing any information that can harm any of our users or put our users in jeopardy"*.[163] The data was not visible in the app itself, but only via the API data that were sent directly to the Tinder clients.[163]

Following up on the breach the next day, several people who were developing or otherwise using the API came forward with stories about the same security flaw being present at different days over several weeks.[164] The vulnerability even cropped up again when Tinder introduced their app on the Android platform. They contacted the IAC and talked to the spokesperson Justine Sacco, who simply confirmed that there had been two breaches and that they do not share the exact location of users and were committed to ensuring the safety of its members.[164]

On June 30, a story broke of a sexual harassment lawsuit from the former marketing VP Whitney Wolfe against the founder and CMO Justin Mateen. They had previously been in a relationship and when the relationship ended, things went bad between them. Wolfe alleged that both Rad, the

CEO of Tinder, and Sam Yagan, the CEO of Match, ignored repeated complaints about his behavior. Allegations about Wolfe missing out as being named a founder and that she should have been excluded on the basis of being female were refuted by IAC and cooperated by witnesses[165], but they suspended Mateen as an internal investigation did uncover "*inappropriate messages*".[166]

It was also found that the *"[…] text messages sent from Mateen and cited as evidence in the case are pretty incriminating. It's entirely possible that Justin's behavior was a series of badly thought-out, emotional responses, but when you irresponsibly date a subordinate, there is no excuse for letting your own drama spill into a work environment".*[167]

In a settlement on September 8 in 2014, IAC and Wolfe settled out of court for an unknown amount. Mateen was fired from both Tinder and IAC in between his suspension and the court conclusion.[168] Various members of the tech community and news bloggers drew conclusions between the gender inequality in tech and the behavior at Tinder, which could be a concern in attracting or retaining female members.[168]

Tinder had severe problems with spammers, scammers and bots. Both bots posting porn links[169], someone trying to collect Uber referral credits[170], or as in late March, early April 2014, several users reported spam bots messaging them about joining the game Castle Clash.[171] It works by a bot matching with a real user and then message them by starting off with a friendly *"hey"* or *"how are you doing"* before moving on to telling them that they are just *"relaxing with a game on my phone, castle clash […] have you heard about it?"*. Then no matter what the user replies, the bot responds with the URL for the game app.[172]

In October 2014, Tinder made a technical update to the system, making it much harder for bots to operate in-app. However, spammers are nothing if not tenacious and instead moved to using SMS as their channel when Tinder blocked the ability to send links in chat messages. The bots now tried to get the users to post the phone number and would then instead continue the previous pattern on there with no way for Tinder to protect its members.[173]

5.6.6   Timeline

In Figure 37, a timeline is shown that lists events from the launch in 2012 until January 2015 where the last statistics where published.
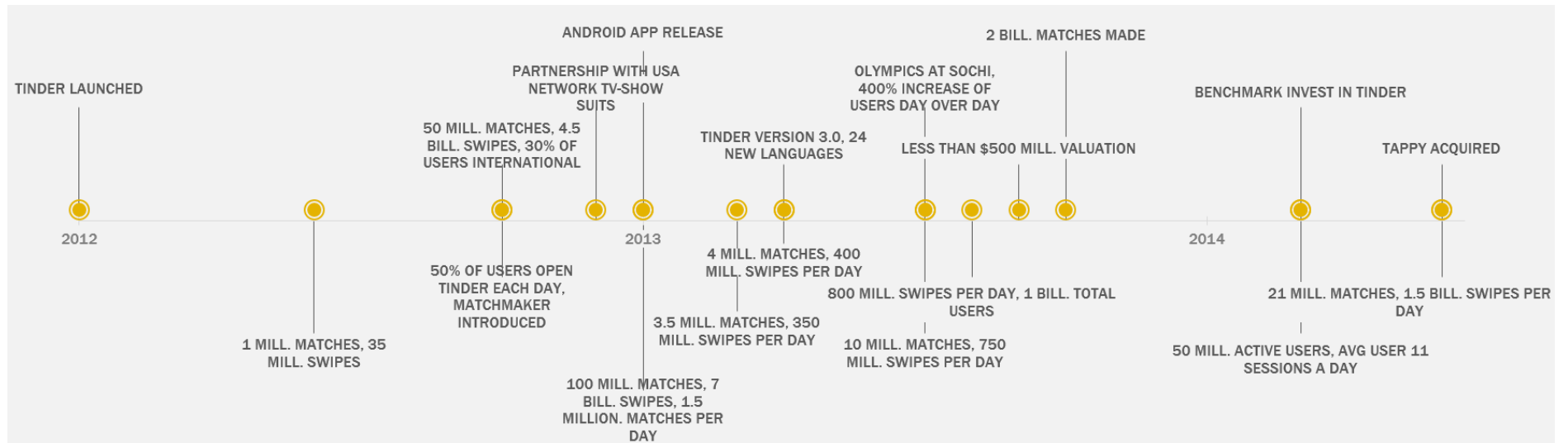

Figure 37 – Tinder timeline

5.7 The Dating Ring
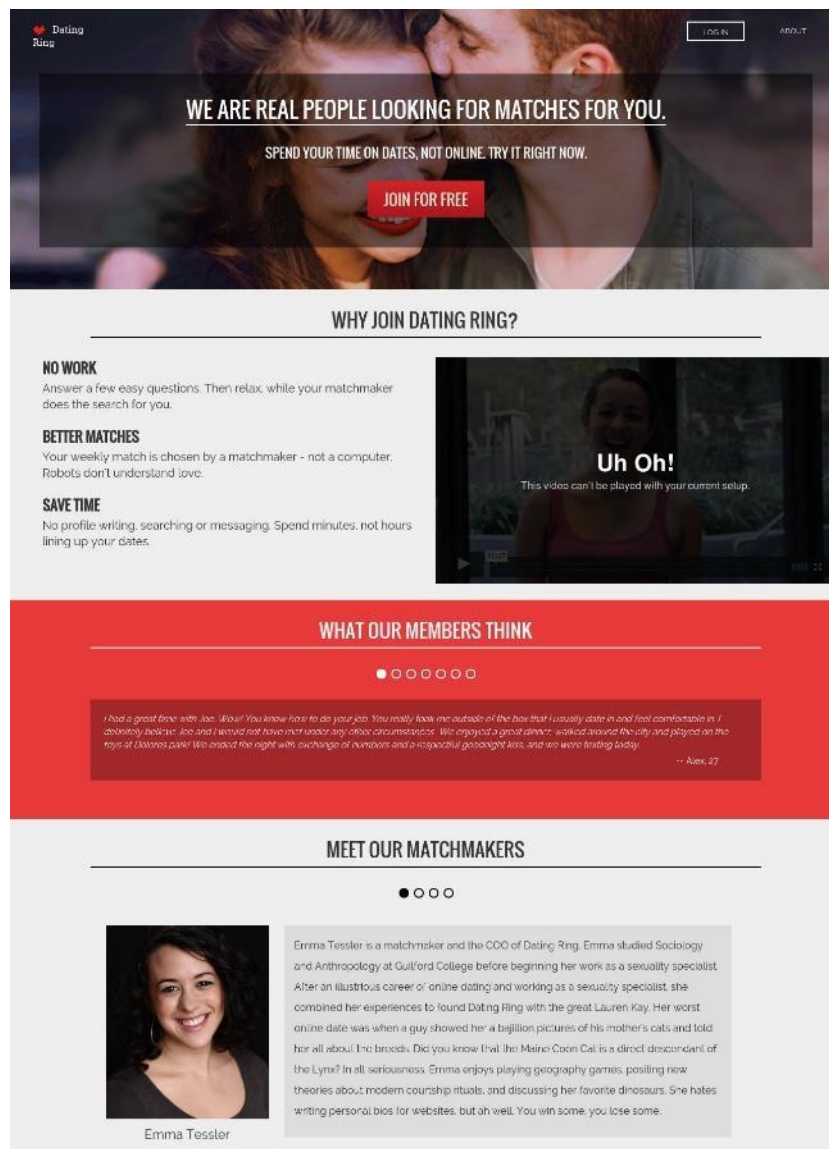
Figure 38 - The Dating Ring Design (2015)

5.7.1 Introduction to the Dating Ring

The Dating Ring (DR) was founded by Lauran Kay in April 2013. While only 24 years old at the time, it was not her first startup experience. In an earlier project, she launched smartsitting.com that matches families with nannies and babysitters.[174] The inspiration for the Dating Ring was found in Lauran's personal life and in her education. She has a degree in American studies with a focus on love, dating and relationships.[175]

The Dating Ring is very different from other online dating sites and can be compared to more traditional matchmaking agencies. While online dating is typically users interacting with other users, the interactions in the Dating Ring is always through professional matchmakers.

Signing up for the service can only be done by connecting with Facebook and filling out a questionnaire about interests and potential partner preferences. The Dating Ring will review the profile and if accepted assign a personal matchmaker.[176] It is free to become a member, but unless you pay no guarantee for matches are made. Free members are matched if they are a good match to a paying member.

A paid membership guarantees one match per month. If a user cancels their membership before the second match, it is refunded. The user can also sign up for premium membership service. Before starting the matching process, a Skype meeting with the matchmaker is held to better align the interests. In addition, premium membership also includes a monthly date coaching session.

When a matchmaker finds a member a suitable match, they send a proposal with the details and a note underlining why it is a great match.[177] If both users agree, a date is arranged. After the date, the matchmaker will contact both members to get feedback on the match. The information from the feedback is important for future matches and of course for determining if the matchmaker should set up a second match.

According to the Dating Ring, one of the biggest advantages about the service is that requires very little effort by the members. The "hard work" are done by the matchmakers. Normally, people would have to create an online dating profile, search for a match between millions of users, messaging with potential partners and then set up a date. Members of the Dating Ring does almost no work. They sign up with Facebook, fill a short questionnaire and then only have to consider one single match once a month.

The Dating Ring's focus is on serious relationships and Lauran Kay refer to themselves as the Anti-Tinder dating site: *"The Dating Ring is in it to help people create potential relationships, to actually go out and date people. We're kind of like the anti-Tinder. We want people to actually learn more about a person. You really have nothing to go on based only on photos. We understand that photos and looks are a part of the dating process, but there is so much more that goes into compatibility"*.[178]

When the founders pitched the concept at Y-Combinator, the message was that they wanted to be nothing like Tinder and more like Uber. What Uber does well is screening the drivers, and that was just as important for a dating site according to their pitch.[179]

When the Dating Ring launched, they originally focused on group dating with six people. As they explained in a TechCrunch interview: *"The hope is that by having a larger group all meet each other, there's a higher likelihood of two people hitting it off than there would have been with just two people".*[180] The date was scheduled for two hours at an informal place and each member gave feedback to the matchmaker after, so dates between two members could be set.

The group dating was however replaced with two-member dates, since it was too difficult to arrange group dating. Finding the right matches is more complicated and scheduling a date and time with six busy people was a problem.[181]

5.7.2   Creating the customer base

The Dating Ring started in New York as the only city covered and expanded one city at a time. Nine months after the launch in New York, they started in San Francisco followed by Los Angeles and Boston. For each new city, a launch party was arranged for singles in the new location. Before launching in a new city, the Dating Ring makes sure that there are an initial base of local singles signed up. This is done by asking people to sign up and promise that when 500 singles have signed up in the city then they launch.[182]

The first couple of hundred members signed up primarily based on word of mouth and after one month, 200 members had signed up.[183] The Dating Ring also had to start hiring matchmakers since Lauran Kay did not have time to screen all members, be the personal matchmaker for everyone and arrange the dates herself.

The sign-up process is easy with Facebook signup and a short questionnaire. Meaning they made it easy to sign-up and easy after the signup, the result was that it demanded a lot less work than other dating sites. The ease of use are a compelling argument to sign up to the Dating Ring especially for very busy people.

Normal membership is free in order to attract more users. However, there are no guarantee that a free member will ever receive a match. That will only happen if they are a good match for a paid

member. A clever way to make sure there are enough interesting matches for the paying subscribers, while still having a value for the free members.

The media had a big impact. One month after the launch, Lauran Kay was interviewed by New York daily news and soon after by popular media like the Business Insider, New York Times and interviews on the television.

The Dating Ring was also in the media when they started a crowd-funding project on Tilt.com, to fly single women from New York to San Francisco.[184] At that time New York and San Francisco were the two only cities serviced by the Dating Ring. The idea behind it was that there are more single women in New York compared to men, while the opposite is the case for San Francisco. The idea was crowd funded with about 10,000 dollars and the event happened under a lot of media exposure, less than a month after the project was created on Tilt. The event did also get some critique, since some argued it to be offending that women should fly to meet men.[185]

The Dating Ring was part of the startup accelerator Y-combinator in 2014.[186] Y-combinator invest in the companies by buying a small percentages and guiding the companies in a three-month period. The standard deal is $120.000 for 7 percent.[187]

5.7.3   Maintaining the customer base

The dating ring organized multiple events to engage with their members as a part of the dating service. However, while the launch parties are targeted at new customers, other events are targeting existing members. Most of the events are parties and are typically occurring during special days like Valentine and Halloween.

Members gain an advantage by sticking with the Dating Ring. The member and the matchmaker gets to know each other better and the matchmaker can use the knowledge of past dates to offer much better matches in the future.

Since the Dating Ring is a young startup, much of the focus is on attracting new users while assuming the increasing members and therefore dates will help maintain the current user base.

5.7.4 Reputation

The Dating Ring market itself as a serious online dating service. They even use the bad reputation of the online dating industry in their communication, calling themselves the anti-Tinder.[188]

The Dating Ring exploits the bad reputation of the industry to their advantage. Unlike other dating sites, they do not put emphasis on free access on the website or in advertising. They focus on quality, finding serious relationships and on professional personal service.

The Dating Ring was accused of sexism, when they flew women from New York to meet men in San Francisco. Tracy Clark-Flory, writer at the Salon, explains the critique as:

> *"The general antagonism toward this business concept is understandable. Here in the San Francisco Bay Area, there is a lot of resentment toward the perceived excesses and entitlements of the tech industry - the private shuttles using public space and Google Glass being worn in punk bars. And, what, now startup bros need their women brought to them just like their Google-campus dry-cleaning? It doesn't help any that the campaign video (embedded below) features a giggly woman who says, 'There's a much larger ratio of men to women than women to men. It's true, I've Googled it before.' "[185]*

Even the pricing was by some seen as sexist. Females had to crowdfund $500 to be invited to the flight and $1000 dollars to include housing, while men would have to crowdfund $220 in total to be invited to the same event.[189] The Dating Ring responded by advancing a later planned crowdfunding for flying men from San Francisco to New York, but it did not receive enough funding. [190]

5.7.5 Revenue model and pricing scheme

Interestingly the Dating Ring's revenue model has changed since the launch. At launch, members paid a fixed fee for the initial meeting with a matchmaker and then a fixed price for each date and not for the membership itself. The initial meeting was priced at $25, while each date was priced at $20.[191]

Currently the Dating Ring has three different kinds of memberships: [192]

1. Free membership
2. Regular membership
3. Premium membership

Free membership is completely free. The free member signs up are pending approval like all other members and are reviewed by a real person. The membership is however very limited. No one is working on getting free members matched. Instead, they exist in the database to make more potential matches for paying members. However, if a free member is matched, the member still does not pay for the service.

The regular membership is currently priced at $60 a month. Discount is offered if the member pays in advance. The price is $40 a month for a three-month package and $30 a month for a six-month package. Members can also cancel their subscription before the second match and be refunded. Regular members are matched weekly or monthly and guaranteed one match. Further, they have a personal matchmaker that can be emailed at any time.

The premium memberships is an extension to the regular membership. Premium members pay for the extra personal contact with the matchmaker. After each date, a premium member has a 30-minute Skype meeting. The matchmaker also meets the member in person for a one-hour consultation. The matchmaker do all the work including scheduling the dates, do in-depth phone screening with the potential matches, choose places where the premium member feels and looks the best and provide date and relationship coaching. Premium members are guaranteed one or two matches a month depending on the agreement. The pricing is determined individually after the initial consultation.[193]

5.7.6   Timeline

The timeline in Figure 39 summarize some of the important events in the Dating Ring's history. San Francisco is abbreviated as "SF" and New York City as "NY".
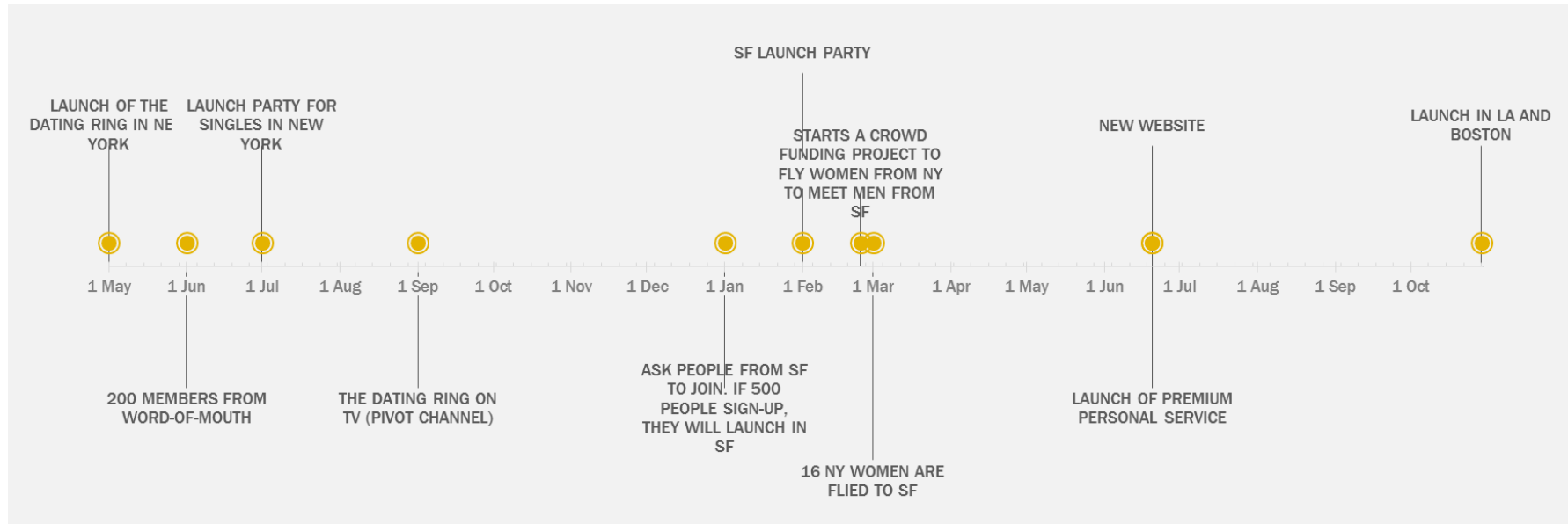
5.8 Summary of cases

The five cases analyzed in this paper are only a small part of the online dating platforms currently operating. However, they give a good overview of the most prevalent approaches to competing in the industry.

The dating companies entered the market under very different conditions. Match was among the first to take dating online. Competition was not a big concern back then, as it is for startups entering the market today. Instead, the challenge was to convince people to do something new and try online dating. A challenging task because of the negative opinions in society at the time. It is interesting to observe how Match tried to overcome this hurdle by adjusting the communication by focusing on what is considered morally correct in society.

The success of the first-movers like Match has inspired many other to enter the market. In contrast to the early movers, these companies did not have to fight the attitude and change the behavior of people to the same extent. However, they have the challenge of attracting users to their own platform in a market with strong intensity of network effects. The online dating platforms studied did this in different ways.

Some companies like Ashley Madison entered the market by focusing on a niche. This is a simple way to deliver more value to a limited number of people, that can make up for the lower network value for a startup without a huge user base. Tinder entered the market by taking advantage of the shift in technology to mobile. Plenty of Fish changed the revenue model to advertising and made the service completely free for users. The Dating Ring made dating local and changed the concept to make their platform less network intensive.

An overview and comparison of findings in the case studies can be seen in the following table:

	MATCH	POF	AM	TINDER	DR
MARKET POSITION	➤ Generic-Mainstream	➤ Generic-Mainstream	➤ Generic-Niche	➤ Unique-Mainstream	➤ Unique-Niche
CREATING THE CUSTOMER BASE	➤ Free beta ➤ Focus on women ➤ First-mover advantages ➤ Marketing ➤ Fighting social stigma	➤ Free ➤ First-mover advantages ➤ New market segment	➤ Free for women ➤ "Shocking" events ➤ Perceived social validation ➤ Enters many new markets ➤ Privacy and anonymity	➤ Freemium ➤ Mobile shift ➤ No rejection fear ➤ New UX experience ➤ Internationalization	➤ Social events ➤ Free limited access ➤ Viral stunt
MAINTAINING THE CUSTOMER BASE	➤ Screening ➤ Acquisitions ➤ Partnering ➤ Security	➤ Mobile web ➤ Mobile transformation and native apps	➤ "Shocking" events ➤ Statistics on usage and social validation ➤ Partnerships with researchers	➤ Anti-spam measures ➤ Development of new functionality	➤ Social events ➤ No "work" demanded ➤ Personal contact with matchmaker ➤ Increased value from learning ➤ High quality from manual matchmaking and from screening ➤ No spam

(CONT.)	MATCH	POF	AM	TINDER	DR
REVENUE MODEL	➤ Subscription	➤ Advertising ➤ Freemium	➤ Free for women ➤ Transactions for men	➤ Freemium	➤ Multiple subscriptions ➤ Started as transaction based
REPUTATION	➤ Advertising ➤ Blogs and articles ➤ Partnering ➤ Lawsuits	➤ Public hacking case ➤ Lawsuits ➤ Distance itself from hookups ➤ Unsophisticated users	➤ Questionable marketing tactics ➤ Site-created fake profiles ➤ Public hatred from affected people	➤ API security breach ➤ Sexual harassment lawsuit ➤ Many spammers and bots	➤ Social events ➤ Very serious (Anti-Tinder) ➤ Criticized for being sexist

6 Discussion

This chapter will begin by applying the knowledge gained during the industry analysis, the analysis of the five cases and the theory on the framework for dating sites that was developed. Then using several key theory subjects, a discussion about their relevance to the dating industry and the cases are presented. There is a discussion about the revenue models and how they were utilized as well as an application of the eight drivers of trust in the reputation section.

6.1 Generic dating sites

The generic dating sites are dominated by older online dating services. It makes sense that the old companies are not following a differentiation strategy, since there were no or very little competition, when they launched. It can be expected that dating sites over time move towards the generic approach as they grow and mature. While a startup might be innovative, if it succeeds others will copy the innovation making it less of a differentiation. This is slowly happening for Tinder, who were unique at launch. Today, new startups imitate the visual concept of cards and the Tinder matchmaking approach.
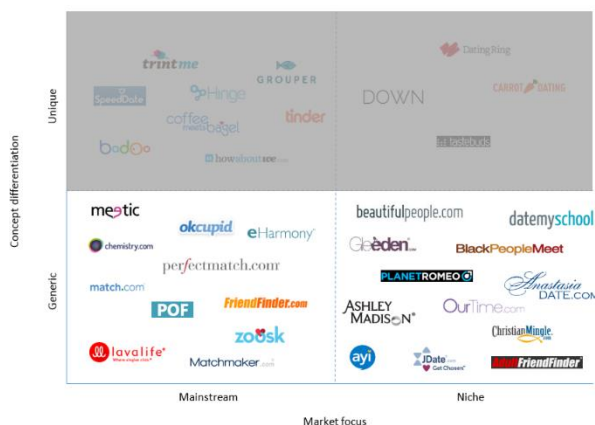
6.1.1 Generic-Mainstream dating sites

Most of the industry-leading dating sites have both a generic concept and mainstream market focus. According to Porters generic strategies, this is not a good approach, since they are not following any of the generic strategies. In this regard, it is important to note, that when they launched they might not have been in this category. Match and other first movers in online dating were differentiated from the offline dating service at that time. They defined what today is considered the generic approach to online dating.
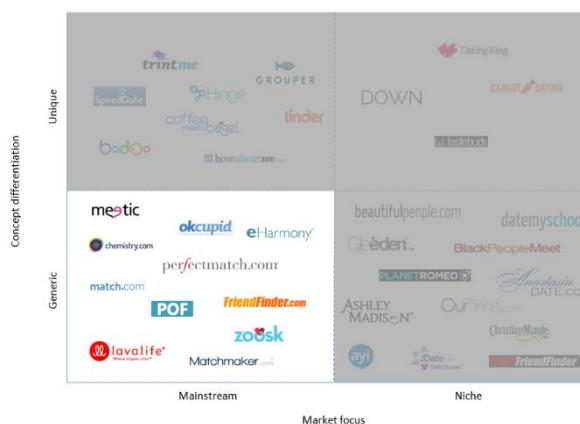
Many of the platforms have a huge user base that have been built over the years. What they sell are access and allow members to search and be matched with many different people. This is in contrast to niche sites that deliver value for a specific customer group and in contrast to unique sites that deliver value by having a unique concept. Generic-Mainstream dating sites compete on the maturity and amount of users.

6.1.1.1 Creating the customer base

Since the companies that have succeeded in this quadrant, started under very different circumstances, the case studies illustrated that one of the major challenges was fighting the social stigma around online dating. Especially Match had to deal with this as the first dedicated online dating platform. Establishing a credible reputation by using word of mouth was crucial, which support the findings of Dellarocas (2003).

Match took advantage of being the first-mover by using the media's interest as a catalyst to acquire customers. This was helped along the way by providing free access for users and then moving on to subscription later on when they had reached a critical mass. As McIntyre & Chintakananda (2014) pointed out, once critical mass is established network intensive markets tends to tip in their direction. PlentyofFish on the other hand, based their entire business model around providing free access for consumers and instead charging advertisers.

Being first-movers meant they did not have to worry too much about multihoming as the competitors were rare and most sites, with the exception of POF, were using subscription paywalls that had users pay up to several months in advance. Switching costs were not only monetary as any relation established would be lost when moving to another site.

As mentioned, it would not be wise to launch an online dating platform without being differentiated or focusing on a niche according to Porter's generic strategies. Since network effects are prevalent, it would be even more difficult as the platform would not be able to increase the total value without differentiation.

6.1.1.2 Maintaining the customer base

Since the companies in this quadrant have a favorable position in the market, it is as much about defending the position as acquiring new users. IAC, as the leading company, protects their position by acquiring many of the competitors. While Match is not innovative anymore, IAC buys new

innovative startups instead of innovating the dating market themselves. As an example, they bought the majority of Tinder, which made them the leading provider of mobile dating. At least until now, the strategy has worked. It is simply too big a temptation for startups to sell the company to IAC for a relatively high dollar amount than having to compete against them.

With all mature companies, there is a danger of death if they do not keep innovating their existing service or create a new one to replace it. Both Match and POF have continuously developed new features and tried to keep up with at least some of the new unique concepts that dating startups introduce. In addition, they can improve in other areas such as the underlining technology or changing the revenue model of the site.

POF has indeed moved on to a freemium revenue model while still showing ads. Most new dating sites are not able to do this as ads are disturbing the dating experience, while POF relies on its massive user base to mitigate the negative impact. Although a new revenue stream is essential for them, it is also positive for users in general, as it lends credibility to anyone who have a "member's badge" and as such are less likely to be fake profiles.

In order to keep maintaining users, the generic-mainstream dating sites needs to keep up with new perceived requirements from users in order to maintain their reputation as a viable dating site.

6.1.2   Generic-Niche dating sites

These dating platforms do not have any innovative concept, but they have narrowed their focus to a specific type of customers giving them an edge in the quality of the installed base. Why should a Jewish person looking for another with the same beliefs, sign up on a mainstream dating site like Match, when they can sign up on JDate. Jews who are looking for other Jewish

members do not value the large diversified user base of Match. The big database can be a disadvantage if it creates noise and irrelevant matches for the user and thus lowers the value. That

niche sites have high value can be supported by looking at how many different niche dating sites acquired by IAC.

The niche focus can be either very specific or broader. A very specific niche focus makes it easier to target the consumers in that target group. However, it also narrows down the potential installed base.

It could be argued that multihoming is more prevalent for niche dating sites, since it does not fulfill all the needs a user has. As an example, a religious person might prefer another religious person and be member of a religious dating site. However, if the person does not reject the possibility of finding someone different this would not be possible on the same dating site.

6.1.2.1 Creating the customer base

It is important that a niche dating site's values are in accordance with the culture of the target group. This is for instance important for religious dating sites, where the norms and values in dating are very different from other cultures. A Christian, Jewish or Muslim dating site would have difficulties in marketing the platform for homosexual dating or for affairs. JDate has been in such a dilemma, since many non-Jewish people has signed up to find a Jewish partner, because Jewish people tend to be wealthier in the US or simply that they find Jewish people attractive.[194] Some Jewish member think this is fine, while others believe it undermines the Jewish community.[195]

With Ashley Madison, the niche is people willing to have an affair or people interested in dating people who are in a committed relationship. Due to the nature of the site, it meets countless oppositions from both individuals and groups who denounce their actions and continued existence. This allowed Ashley Madison to create a strategy that reminds one of the "shock and awe" tactics in warfare. This happens every time they are looking to establish and create a new user base in a new location. Leading up to a launch in a new region, they will bombard the area with advertisement and perhaps propose to sponsor or otherwise overtake everyday entities. This leads to massive media attention and often tens of thousands of signups.

6.1.2.2 Maintaining the customer base

Depending on the individual niche site, it can be difficult to enter the market when there is a viable alternative. For instance, for Jewish users, JDate has been dominant for more than a decade and for infidelity Ashley Madison have no real competitor worldwide. There is however, the

Nordic started infidelity site, Victoria Milan, who made the niche market even smaller by focusing on Denmark, Sweden and Norway.[196] Later on, they expanded to other locations. In that way, it may be possible to bootstrap their business to one day go against Ashley Madison.

In order for the incumbent in a niche market to retain their market leader status, they should continue to provide the best possible service for the customers that they intend to obtain, as they do not compete on functionality or concept to the same extent. However, market leaders should be aware of technological shifts and if their market becomes newly vulnerable.

6.2   Unique dating sites

Almost all dating platforms in the unique concept differentiation quadrants launched within the last five years. As seen in the analysis, one way of attracting users is by using new unique ways of pairing members. It is a way to attract users with the promise of newer and perhaps better ways of finding love. Having a unique concept also increases the chance of being noticed by startup

bloggers and tech news sites, as they always like to feature the next new cool thing. Another way to make a difference is to lower the barrier to entry by changing the way the users are treated, as Tinder did, by removing the fear of rejection. It could also be to put the users into a casual and familiar setting, as Badoo did, which is a chat site with dating build on top of it.
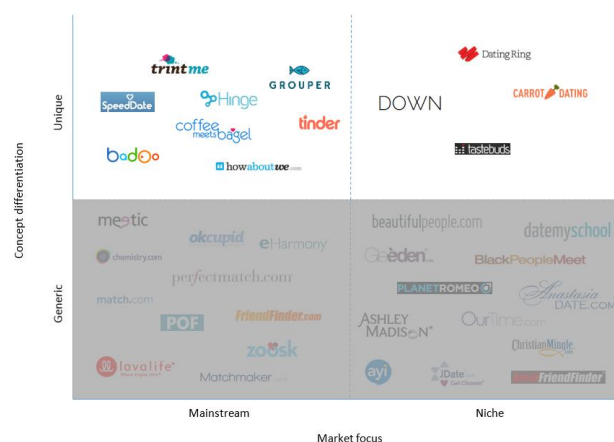
6.2.1   Unique-Mainstream dating sites

With a low niche focus, the demographic and user segmentation is a lot like that of the generic-mainstream platforms. However, the main difference is that users in the unique differentiation chooses to engage in new ways to communicate or that another process for interaction appeals to them. The average age of users in this section is also a lot younger; both due
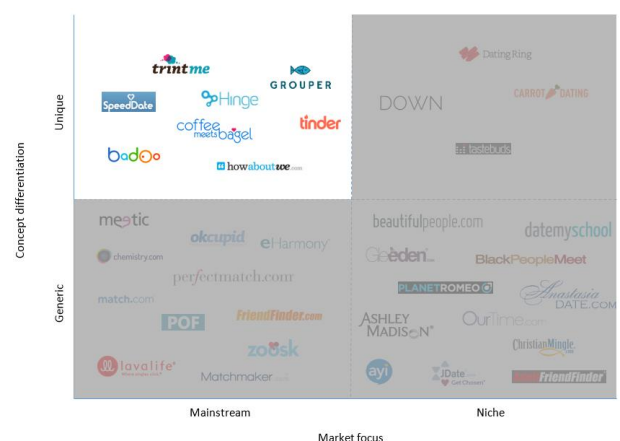
to the willingness to adopt new things faster, but also that the usage of other similar technologies and connection with networks, such as schools and universities, where such things spread quickly are common.

6.2.1.1 Creating the customer base

Not all dating sites started in the quadrant they later ended up in. For instance, Tinder started with a high niche focus in the Unique-Niche quadrant, as they only focused on people from universities who attended frat or sorority parties. Beside their niche focus, Tinder had a new innovative mobile UX that changed the way people approached dating. After obtaining a critical mass of users, it was now possible for matches to appear from outside of universities and Tinder changed their focus to the mainstream segment. This is a viable strategy for dating startups that are looking to go beyond a niche focus.

The users attracted to the Unique dating sites are often very comfortable with new technology and adopt new trends quickly. For companies trying to acquire customers in the Unique-Mainstream quadrant, it is important to defend their unique position by continued innovation on their original concept or they stop being a unique dating site. Instead, they move into the Generic section where they have to rely on their big user base.

6.2.1.2 Maintaining the customer base

If the company succeeds in acquiring enough members, it is possible to continue an upward trajectory for most of the mainstream companies. The reason being that they utilize positive feedback loops due to having acquired a critical mass of users and that they will continue to attract even more users as they have something unique. At least until another new unique concept supplant theirs or that it is copied by many other sites and therefore become common functionality.

Tinder were the first big success in mobile gaming. They had massive success both because they were first-movers in the mobile market, but also that, for the first time mobile dating was paired with an intuitive interface. This interface simplified the user interaction and at the same time still maintained the information that was important to a major segment of dating users. At some point many new and old dating sites will adopt Tinder's approach or an iteration that is better and Tinder will then cease to be in the unique category and move into the generic quadrant.

It is therefore important for dating sites in this category to continue to innovate and provide new features that set them apart from the sites in the low quadrants. In time this give them the advantage of not only having a huge user base that in itself attracts users, but also by having unique and interesting features or new concepts that can attract even more new members.

6.2.2   Unique-Niche dating sites

The dating sites in this quadrant are truly unique because they are both innovative in concept and are focusing on a specific customer group. The dating platforms in this category are typically very new and most only begin in this quadrant to get the niche advantages initially before going after a broader spectrum of users.

6.2.2.1   Creating the customer base

This quadrant is not only an innovating area, but also one that caters to a niche. This means the installed base is very small to begin with, which is both good as it allows a startup to focus on exactly their primary segment, but also a challenge as the pool of applicable users are greatly reduced and it is harder to reach critical mass.

However, as seen in the case of the Dating Ring, the very specific and innovative nature of the startup is an advantage in being exposed by the media. The Dating Ring was very early in well-known newspapers and even the television. The same happened with Down who had a lot of media attention due to the new concept and niche. It was also that they were able to be the first app to combine mobile technology, Facebook integration and a very particular niche market for people looking for hookups with friends. In other words, they were able to create a new combination of the right technology and niche market.

The dating companies get both the advantages already discussed for niche sites and for being new and innovative. The difficulties can be in communicating a new concept that users are not familiar with or do not understand based on their previous experiences with other dating sites. If a user is used to other dating sites, the switching cost from relearning can be high as stated by Tawfik and Enders (2008).

Since the online dating platforms in this category are young, the dating sites studied had not yet reached a state where maintaining the customer base were as important as attracting new customers were.

One important part is to provide a customer service and follow-up that cannot be found in larger competitors. For the Dating Ring this is done by building the company around extraordinary personal service and communication. It is also important to build loyalty to the dating site and create an experience where customers believes they are part of something special.

Positive reputation in both the media and in the awareness of friends of users of the service is also important as it validates their continued commitment to the service.

6.3   Dating as a two-sided market

Online dating is a two-sided market. In the general case, it can further be identified as a matchmaking market. The value consist of matching the two sides. While obviously not always true due to same-sex daters, the two sides could be defined as men and women as that is most often the case. However, the sides could also simply be defined as match seeker A and match seeker B as seen in Figure 40.
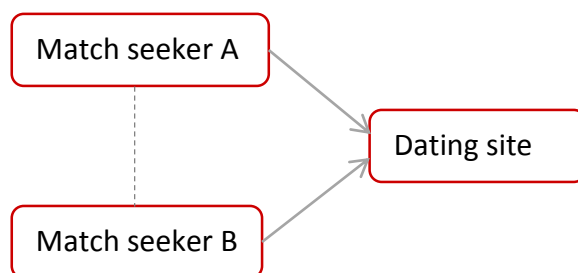
Figure 40 – Dating as a two-sided market

For most of the dating sites, the interaction happens directly between the two sides. The dating site provides the tools and interface that makes matchmaking possible. A few web sites like the Dating Ring changed this concept, where the interactions happens between users and the matchmaker. It is not even possible to interact or see other users on the site, unless a matchmaker sets up a match.

Other dating sites change the structure of the two-sided market by adding advertisers as a third side. This transforms the focus of the two-sided market from a matchmaking market to an audience-making market, but it contains both parts. This is the case for PlentyofFish. The structure can be seen in Figure 41.
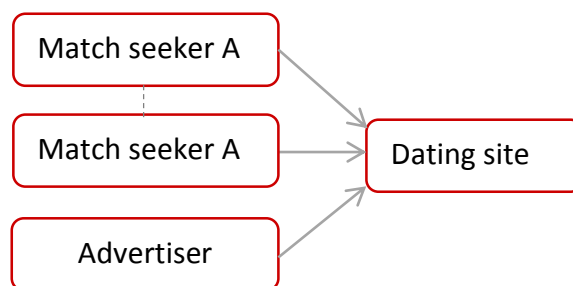

Figure 41 – Dating as an audience-making market

Interestingly a dating site doing a good job at getting people in a relationship might lose their members. Most people looking for a partner will no longer need the dating service, if the online dating platform succeeds in finding them a partner. This could create incentives for dating sites to prevent finding long-term relationships for the members. However taking such actions would not be wise. First, such a strategy would lower the value for members and would be likely to result in not being competitive. Second, they might return later in life and third, while the members might leave due to the need being fulfilled, they can be possible advocates for the sites. Single friends of the couple might ask how they found each other and sign up for the dating service. Users share their experience on social media sites and review sites. People ask for recommendations on forums about experiences in dating[197] and on the review site Trustpilot, a happy Match member begins her review with:

"Have met my boyfriend through Match.com. I am not the type who is finding a boyfriend over the net and was therefore extremely skeptical when I joined, but it was my only opportunity to meet new people, so I tried for about a month. I received many inquiries from all kinds of people, uninteresting people, unpleasant people, stupid people, nice people, etc., but between all the uninteresting contacts appeared suddenly one that caught my attention. He was just the one I wanted!".[198]

6.4 Winner-takes-all dynamics

In the literature review, three things are identified that contribute to forming winner-takes-all dynamics: (1) strong cross-side and same-side network effects, (2) high multihoming costs (3) and no strong need for differentiations. The three factors are discussed in an online dating context in the following. The network effects discussion is expanded to include a discussion about the network intensity in the market using the McIntyra & Chintakananda (2014) model. The model is shown again in Figure 42.

6.4.1 Network Intensity in online dating
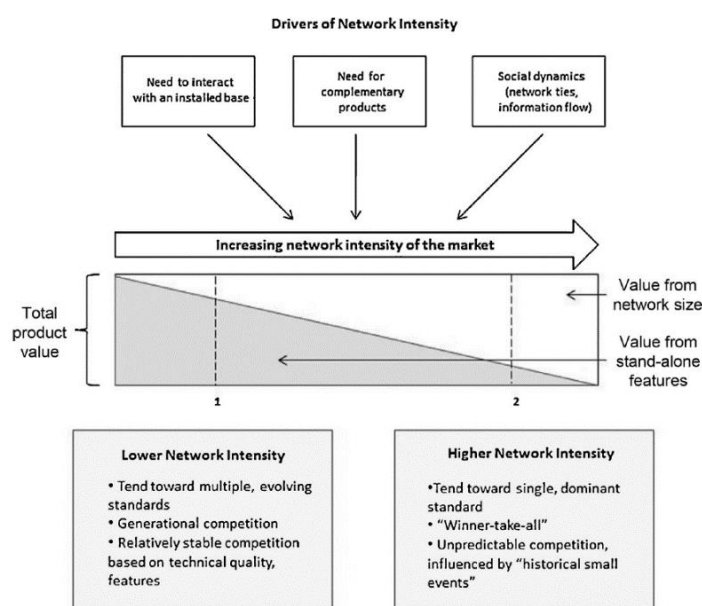
Figure 42 - Factors influencing the network intensity of a market (McIntyre & Chintakananda, 2014, p. 119)

6.4.1.1 Driver 1 - Need to interact with an installed base

The social nature of online dating generates direct networks effects in the online dating market. There is no doubt that the total product value consist of at least a proportion of the installed base. The value of using an online dating service is zero if there are no other members. The more members the more potential matches. Hence, in online dating the network intensity is deemed strong because of McIntyra & Chintakananda's first driver – The need to interact with an installed base.

All online dating platforms analyzed exhibited a need to build a installed base quickly, even prioritizing it higher than generating revenue during the launch phase. Match, PlentyofFish and Tinder launched completely free, and the Dating Ring and Ashley Madison had free membership options.

6.4.1.2   Driver 2 - Social dynamics

While Match and PlentyofFish have succeeded in attracting a large database of a different spectrum of members, other dating sites show that it is possible to do well with a smaller but more focused installed base. Members of niche sites like Ashley Madison and the Dating Ring have stronger social ties than members with nothing in common.

The Dating Ring is interesting in this regard, since they focus on specific people. Only people from specific cities can sign up and they are further narrowed by only focusing on people looking for long-term relationships. The Dating Ring is a perfect example of a platform that influenced the nature of the network intensity in the market. The driver, the need to interact with an installed base is much less important because of the very specific niche and because of the concept where users do not interact directly.

6.4.1.3   Driver 3 - Need for complementary products and services

The analysis showed that some dating platforms had complementary products and services. Match had different events for singles that was not directly part of the normal service. In addition to their forum, PlentyofFish provides a platform for user created events by allowing users to invite other members to their event. Dating Ring have company created events and market them as exclusive events for their members.

There is not a strong need for complementary products and services. The case studies for Ashley Madison and Tinder did not find any complementary products or services at all and it was very limited with complementary products and services in dating sites in general. However, as the other three cases illustrates, users do value offers such as events.

Complementary products and services could be an unexploited opportunity for dating sites. It is not difficult to come up with services that are needed in the dating process. Dating sites could collaborate with flower and chocolate delivers, romantic restaurants and locations, hairstylists, fashion magazines or even with personal advisors.

Based on McIntyra & Chintakananda's three drivers on network intensity our analysis indicates that online dating is a market with relatively high network intensity. That is not surprising, since it can be compared to social network sites such as Facebook that is often identified as a pure network market. Online Dating platforms share many of the same characteristics. They both consist of members interacting, but while Facebook is mostly about maintaining relationships, online dating is about creating new ones. Online Dating sites thereby do not need to attract most of the people from the user's personal network to be valuable. Instead, they have to attract enough members to ensure matches.

McIntyra & Chintakananda argue that a market with strong network intensity will tend toward a single, dominant standard, with Winner-take-all dynamics and unpredictable competition before a winner has been established. As argued the network intensity is very high, but not as high as social network sites, which can explain why the market is concentrated around a few big companies and IAC being the dominating entity in the market.

6.4.2   Multihoming in online dating

According to a study from 2012, 26% of online dating users visit more than one dating platform in a given month.[199] The high degree of multihoming is not surprising looking at the opportunities for signing up quick, easy and free on most platforms. This enables for users to get access to many platforms with no added costs.

Since 2012, there has been an increase in new successful free dating sites such as Tinder and Down. As Roson (2005) said, multihoming works well if there are no or low fixed cost. For new dating sites this is a great way to attract users and retain them while building up a user base. The danger is that the lock-in could be tenuous and respond dramatically to any subscription paywall. Instead, a freemium payment solution can be implemented as seen in the case of Tinder and PlentyofFish.

PlentyofFish actively encouraged multihoming by having the free part of the site be subsidized by regular advertisers or referrals to existing subscription sites. This multisided market also mitigates the cost of losing a customer by having them switch to a competitor, because the competitor is already paying for the user.

For dating sites such as Tinder, that only have a matchmaking presentation (no customizable search to mitigate erroneous results), providing the right matches become crucial when the lock-in is virtually non-existent. Both the amount of users available to display, as well as the compatibility of the users are factors that determine the success of the site.

If low amounts of users are available, the site could either include less valid matches to buff up the results, or go in the opposite direction and present fewer, but more appropriate matches. However, unless the matching algorithm has moved beyond what current sites are able to achieve, those deemed unfit could very well be perfect matches and the first strategy is therefore the safest.

6.4.3 Need for differentiation

The success of the many niche sites illustrates that differentiation is valued in online dating. Many of the online dating platforms identified in this paper have exactly the same concept and features as the big mainstream sites like Match and PlentyofFish, and their value proposition lies only in the common characteristics shared by the members.

A smaller database with similar people can in some cases be an advantage compared to a big database with many different people. If it is difficult to find good matches among all the irrelevant, then it is not only irrelevant for the user that there are many members, but it is a negative direct network effect as Shapiro and Varian (1998) said.

6.4.4 Conclusion on winner-takes-all dynamics in online dating

While winner-takes-all dynamics are present in online dating due to relatively strong network effects, the winner-takes all dynamics are countered by multihoming opportunities and a need for differentiation. Furthermore, the network intensity is strong, but not as strong as social media sites due to the matchmaking nature of online dating platforms.

The winner-takes-all dynamics emphasize the need for creating and maintaining the installed base. Any startup in the dating industry needs to have a strategy in this regard. It is not enough to be better than competitors are. Due to the dynamics, it is just as important to reach the critical mass. It is possible to counter the dynamics by changing the network intensity as the Dating Ring did or to focus on a niche.

6.5   Newly vulnerable markets

While studying the industry, we did an interesting observation. Although it is difficult to compete as a startup, Tinder did very well. They took advantage of the changes in consumers' online behavior, where many began to use smartphones. Smartphones are a technological innovation that are opening opportunities in the online dating industry.

The observation can be explained by the theory of newly vulnerable markets by Clemons et al. (2002). They found that newly vulnerable markets have three essential components: (1) newly easy to enter, (2) attractive to attack and (3) not difficult to defend against imitation from incumbent firms.

Smartphones, especially the first iPhone, changed the way many accessed the Internet. Both in terms of accessing the Internet through a browser and by using native apps. Today most dating sites have adapted websites with responsive web design, mobile versions or native apps.

With the proliferation of smartphones and consumers now willing to pay using them, it opened up for new ways of doing online dating. No one knew the best way to adapt the business model. The market got newly easy to enter.

There are clearly money to be earned if you can attract and maintain the users. As Clemons et al. (2002) states, the market is attractive if you can attract the profitable members and let the competitors keep the least profitable ones. Tinder did not separate the profitable from the unprofitable users, but they could have tried using the newly vulnerability in the market to target the most profitable customers.

The Dating Ring showed that there are differences in this regard, and they got revenue early by targeting very serious consumers, who were tired of the large platforms and were willing to pay a high premium for a quality service.

The industry is easy to defend because of the high network intensity. With smart phones making the industry newly easy to enter, attractive and easy to defend, the online dating industry got vulnerable. Tinder is the perfect example of a startup company taking advantage of a market that was in a competitive equilibrium and suddenly got vulnerable. Tinder is now the market leader of mobile dating and bought by IAC and the industry is no longer vulnerable.

However, such opportunities will rise again with technological innovation or with political intervention. The established companies seem to understand the importance of being either fast to close vulnerabilities or to take advantage of them. Wearables have yet to gain attraction, but Match is already out on Android smart watches and Zoosk has announced that they are going for the wearable market to grow the user base.[200]

6.6   Revenue models

The dating sites use a variety of different revenue models. The largest dating sites use primarily subscription models. Some dating sites like Tinder does not even start with a revenue model, many of the platforms have changed the revenue models one or more times and some have experimented with secondary revenue models to increase the profitability. This implies that even the industry is struggling to find the most profitable way of monetizing the user base.

6.6.1   Subscription models

Subscription models are the preferred choice for most established dating companies. Many of these choose a freemium model. This is understandable because of the low marginal costs and network effects making it important to grow a large user base and at the same time being able to offer the service for free or at a low price. Even the Dating Ring, where the marginal cost is a lot higher, found a way to offer free access. In their case, the free access was to attract members, so paid members have more potential matches and not to acquire more members, that might pay in the future. While the free members on a site like the Dating Ring can be seen as free-riders, they still provide value for the paying members.

Free access lowers the required level of trust needed for signing up. While Enders et al. in their classification of social network sites model argue that trust is more important in subscription models, they do not take the combination of free and subscription based models as freemium into account. By offering free access, it should be possible to lower the need for trust at least at the time of registration.

6.6.2   Advertising models

Offering users free access is an effective if not necessary strategy for startups in the launch phase, even if the revenue model is based on subscriptions later on as was the case of Match. While free

access is often paired with advertising, that is not a viable revenue model in the launch phase for many sites, due to the low amount of users and the risk of giving a negative first impression.

For startups, the high presence of multihoming in the dating industry should be taken advantage of. It is difficult for a startup to appear more valuable than one of the larger sites, but they can try to present themselves as a viable secondary option. Free access is the right choice to get users to multihome.

The advertising model is in most cases banner advertising. PlentyofFish is interesting in this regard, since they advertise for other online dating sites. The incentive to build a quality service is in this regard low, since the platform profit from people leaving the site to sign up at the competitor. If the quality is too high the user might not leave, but at the same time, if the quality is too low people might not join in the first place due to negative word of mouth.

The grow of AdBlock Plus can be seen in Appendix 5 - AdBlock Plus monthly active users. It shows the massive increase from 2009 with 20 million users, with the highest acceleration by 70% from June 2013 to June 2014 ending with 121 million users. In the US 28% of the US, population uses Adblock Plus with millennials accounting for 41% of it.[201] Another problem was the increasing shift to mobile as advertisement on mobile is next to nothing compared to that of a desktop user *"Google has reported declining value from clicks on its ads. And the shift to mobile ads is accelerating the decline, because it produces a fraction of the revenue of desktop ads".*[201]

It is clear that the advertising model is under a lot of pressure.

6.6.3   Transaction models

Transactional models is an interesting option, since it has the same free access advantages as advertising models, but requires less users and ensures faster revenue. However, only a few dating sites have based the primary revenue model on transaction models. Ashley Madison showed that it is possible though, and other startups like Happn are also based on such a model.[202] Since the value in dating sites comes from transactions, the model makes sense. Furthermore, the model does not suffer from lost customers due to absence of price discrimination as in the single price structure of many subscription models. Customers will pay for the activity level demanded.

The Dating Ring launched with a transaction model, where the members paid a price per date, but changed that to a subscription model. In interviews, the Dating Ring claimed that the service was profitable very early under this model. While not confirmed by other sources, it could be a viable business model early, since users has less to lose in a transaction-based model, where they only pay for usage and it is therefore easier to get user engagement.

Transaction models are often used as a secondary revenue source in the form of micro transactions. This was also the case with Plenty of Fish, where users could buy virtual gifts. People value virtual gifts, because unlike a message that is free (not counting subscription price), sending a virtual item puts a certain level of significance behind it. For POF the problem was both a very poor pricing strategy, as well as their timing in a very micro transaction hostile environment back in 2009. It has been hard for companies in all industries to rely on virtual goods or micro transactions in general. In fact, it is not until recent years that using micro transactions is finally an acceptable form of payment.[203]

6.6.4 Price discrimination

Multisided markets are about price structure as well as price level. Since the sides in two-sided markets primarily consist of men and women, online dating platforms should be careful in price discriminating on gender due to laws and ethics. However, theoretically, price discrimination would make sense, since most sites have less active women than men.

Ashley Madison have different price levels for men and women and seemed to be successful in that approach. Other dating sites has done it as well, e.g. Sugardating where beauty are exchanged for wealth. These sites does however operate in what many already would find ethical unacceptable and the price discrimination on gender might therefore not be as provoking as the concepts.

Price discrimination can take place without charging different prices to the genders. Virtual gifts can be seen as a price discrimination, since some cultural norms implies that men should buy women gifts. Introducing virtual gift can thereby be seen as price discrimination without specifically discriminating men.

6.7   Word of Mouth

During our research on review sites, plenty of evidence of a long-standing tradition of false reviews was discovered. Online WOM and the trust necessary to act on them are becoming increasingly problematic. For the average consumer it can be difficult to be certain whether a review site is genuine or not, so difficult in fact that WIKIHOW have made an eleven-step guide to identifying fakes.[204]

There are countless examples of attempts to help consumers identify false reviews from major publishers such as TIME[205], CNET[206] and FORBES[207]. However, for the first time in history in April 2015, Amazon sued a creator of false reviews operating at *buyamazonreviews.com* among one of his sites because *"… these reviews threaten to undermine the trust that customers, and the vast majority of sellers and manufacturers, place in Amazon, thereby tarnishing Amazon's brand"*[208].

Dellarocas (2003) said that the trust and credibility of not just the reviewers but also the sites themselves are extremely important for word of mouth to positively influence consumers' decision-making.

6.7.1   Trust and Credibility

In this section, we apply the model for drivers of trust on the findings in the analysis and cases. Examples are given where relevant for each case or otherwise omitted.

6.7.1.1   *Brand strength*

Depending on which quadrant the dating site belongs to there is variance in their approach to building and maintaining brand strength.

Match and Plenty of Fish both had unique starting positions that allowed them as first movers to build a reputation and awareness. In their later years as more and more dating sites began to emerge, they resort to traditional means of maintaining their brand as seen in the case of Match's TV advertisement budget. They also have an extensive affiliate program as well as online ads via Google AdSense and ordinary web advertisements. The reason for this is that they have both a mainstream focused user segment, and at the same time, they do not have any new unique

features. The only time they get free screen time is if they publish some interesting metrics about their business, which they have been hesitant to do in the last couple of years, or if there are some bad press such as a lawsuit.

Even though Ashley Madison has a specific niche group of people that they focus on, they still use marketing online and offline. Much of their brand is built on the shock effect and it allows them free time on newspapers, blogs and TV. Sometimes they do not even need to spend money. All they have to do is wait until someone inevitable objects and make a huge protest about it. Then they get free screen time and the project is cancelled with either minimal or even zero cost for them. The CEO had countless interviews talking about the business and why it is not only acceptable (to him), but is actually a good thing that can save marriages. This aligns with people looking to cheat on their spouse, as it gives them a public validation in what they are doing.

The newer dating sites such as Tinder and the Dating Ring had a lot shorter time to build up their brand. Tinder took a page from Facebook's strategy and started in a concentrated area of young users with high propensity for adopting new technology and who were very socially active. Tinder attracted many users when they aligned themselves with athletes and movie stars. This meant building up the perception that even the highest echelon of society used Tinder. Moreover, here the fans might meet their idol just the same as they can on Facebook, Twitter and Instagram, giving them a feeling of familiarity and casual use.

The Dating Ring decided to ride on Tinder's wave and branded themselves as the Anti-Tinder of dating, effectually given all those people who believes that Tinder's users are shallow and casual a new place to be.

6.7.1.2   Privacy

The privacy for all dating sites has been considered of the utmost importance. In the old days in the beginning of dating, it was considered particular embarrassing to be on a dating site, how desperate, lonely and even pathetic one had to be. So instead of using real names the anonymity of aliases were quickly adopted. Besides the anonymity, there were also security concerns to consider.

After the invention and further propagation of Facebook, it no longer seemed like real names was as much of a problem, except in the dating industry. Here people were still uncomfortable with

giving out their real names, as there had been cases of stalking and personal attacks. A few sites such as Tinder are using members' actual first names when displaying their profile. This gives the perception of a more familiar and real connection.

6.7.1.3   Security

Often security and privacy concerns are interwoven in today's online services. Time after time another big site or portal is hacked and hundreds of thousands of user data compromised. Both Tinder and PlentyofFish have experienced serious breach of their data. Identity thieves can make much use of having access to a full name, birthdate, picture, address and so on.

It is crucial for all sites to make their members feel as safe as they can be with the data that they give. With GPS tracking in mobile dating apps, the potential for security issues is quite alarming should it be hacked in some way. Stalkers would have some unwelcome opportunities to track their victims and burglars would know if you were home.

Another security issue for most dating sites that is rarely talked about are the users themselves and their passwords. Dating passwords are notoriously bad and many sites still use a login, based on the username displayed on the dating site making it easy to try to guess the right combination. In 2013, OkCupid was hacked and 42 million user passwords were leaked. The code "123456" was the password for 1,902,801 users and "aaaaaa" for 32,273 users.[209]

6.7.1.4   Navigation and presentation

There are vast differences between navigation and presentation on a website and in a mobile app. The information amount on a website is much more intensive and being able to present that in an appealing way will give users a higher degree of trust as it appeals to the professionalism.

However, as was the case with PlentyofFish, Frind did not want to change the somewhat chaotic and non-intuitive design simply because it worked. This is counter intuitive to what would be expected, but considering a used item store where everything is a bit messy, unorderly and maybe even a little dusty, it is what is expected and fitting in a way.

The same can be said for a free dating site. There is just not the same level of expectation on design and usability as on a paid site when getting the access free of charge. That is at least how it has worked up until Tinder launched.

Tinder, the visually pleasing mobile-only dating app where simplicity in presentation and ease in navigation is essential. Here users show massive time consumption with several sessions a day.

6.7.1.5 Advice

Every single dating site researched has advice on how to minimize personal risk. However, it is not always easily found. Most of the sites has it among the small, grey links in the bottom next to privacy, about us, and contact. Tinder's website however has minimal content, as its main function is on its mobile app. For some reason they neither have a link to privacy or security on their pages anywhere, it can only be found by a Google search using specific terms.

One of the primary sources of advice for all dating sites are their match algorithm. Some claim that they can find love, others simply that you will receive matches that fit those that you previously have visited and finally apps like Tinder that will use locality and a few chosen properties to advice you of viable hits.

The Dating Ring has an additional source of advice integrated into their premium services. Much like a personal shopper, they will help premium users with getting the right profile text, clothes and general picture quality. This will help alleviate some users fear of not being presented in a positive way or simply because they have never tried dating before and it can seem daunting to new users.

6.7.1.6 Community

One way to foster trust is by allowing a community to interact via a forum or comment section, in dating it is not something most sites have. Often users have to go to one of many external forums to find discussions about dating in general and the dating site they are using. It would otherwise seem like a good idea for users to exchange views on dating and help each other out. However, as each of the sites have some extremely vocal unhappy customers, forums could prove to be a huge job to keep clean and relatively constructive.

The only exception to this case is PlentyofFish that has had a forum since February 2004.[210] There are some clear rules to be followed, for instance it is not a platform for self-promotion, which must be done through the regular profile. A forum where everyone can communicate could also be problematic for subscription sites that do not allow users to interact unless they pay, as it would otherwise allow them to circumvent this.

Nevertheless, PlentyofFish has it all, how to deal with heartache, profile reviews (from other users), dating tips, forums dedicated to local areas and even a forum for suggestions or comments about POF. This is where one would expect problems to be evident but there were almost nothing but calm questions and suggestions with the odd spam message not yet dealt with.

During the research, there was looked for other factors that had helped secure the big dating sites continued domination besides the self-sustaining user pool and at least for POF this is a big differentiator compared to other sites.

6.7.1.7 Order fulfillment

With the exception of Ashley Madison who uses credits in a transaction for (men) contacting each women, every other site uses some variance of a subscription or freemium model. This means that there is only one transaction for a user and it happens when they buy access. However, in this case order fulfillment can be viewed as more than a monetary transaction and could be the promise of love or dates from the company to its users. In order to build trust where there is no "order history" as such, the companies instead provide testimonials of happy costumers to otherwise indicate a fulfillment of their promise.

This is of course a lot easier for dating sites where there is no problem for members to go public. However, on a site such as Ashley Madison who has built up its site on the premise that it is discreet. One could hardly expect members to come forward and talk about how happy they are at Ashley Madison, and how it allows them to cheat on their spouses while evidently still being in a relationship with them. This problem could explain why their CEO has been in the press so often talking about new outrageous proposition half of the time and the remaining time used on giving numbers on how many and how well all their members cheat.

6.7.1.8 Absence of errors

Absence of errors in the dating industry is important if it disrupts the matching or communication flow of the users. However, contextual, visual or other minor errors should not diminish the level of trust significantly.

The largest trust factor are errors pertaining to security and privacy issues as these could have a huge impact on the continued use of the dating service.

There have been several major events where the companies studied have generated a lot of online publicity in both blogs and forums. Most notable are the negative stories that generally catch on in the news sites and blogs, as well as negative forums posts from users with personal experiences or opinions. Despite a lot of negative press and comments, there are a lack of impact for the dating sites. For instance, Match has cases where members were scammed, harmed or almost killed. However, it does not seem like it stays a topic for very long in the dating forums. In addition, Match had due to its first mover position plenty of talk about it and online dating in general.

For another old dating site such as PlentyofFish, it had many years to measure consumer responses to various undertakings and they have tried to follow the direction the flow of the responses went. Mainly it was the changing technological environment and their willingness to respond to user demand for a mobile app that saved them from death.

Tinder engaged the younger demographic with exclusive parties. People then came back to friends and excitedly told them about the awesome new app. Or opposite responses where Ashley Madison have had many people and groups talk about their site in very harsh and negative ways in public that nevertheless ultimately caused AM to have an influx of new users signing up.

Finally, the Dating Ring have perhaps the easiest measures and response opportunities as they deal directly with members every day. It is possible for them to build unique and lasting personal relationships between their matchmakers and their clients. This fosters trust and loyalty and upon successfully matching a couple, they are loyal advocates of the service according to the model.

7   Recommendations for startups

As a growing $2 billion industry in the US alone, the online dating industry is an attractive market. The market is however subject to winner-takes-all dynamics and thereby difficult to enter. The thesis investigated the opportunities and challenges for startups to enter and compete with incumbent firms.

Entrepreneurs looking to compete in the online dating industry have a huge challenge ahead of them. Although existing theories focus on reaching the tipping point and winning the market, this

study has shown, it is possible to enter a market with network effects as a latecomer. Based on this thesis, we have formulated the identified opportunities as recommendations for startups in online dating.

Keep an eye out for market vulnerabilities and take advantage of them

Take advantage of new market vulnerabilities. The case of Tinder showed that a market could become vulnerable with technological innovations in society. When the market is vulnerable, it is a good time to enter the market. Being the first to take advantage of the vulnerability, the startup can experience first-mover advantages in being first to a new technology.

Consider designing the concept to decrease the network intensity so the size of the user base is less problematic

Consider influencing the network intensity. Network intensity was found to vary depending on the service. The Dating Ring changed the network intensity by developing a concept where network effects are not as important as it is for the rest of the industry. They did that by hiding the members, so a member does not feel that the site has a small installed base.

While the Dating Ring manually creates the matches, it should be possible to create a matching algorithm that automatically performs the same tasks as one of Dating Ring's personal matchmakers and in addition offers the same high scalability of traditional dating sites.

By focusing on a niche, a startup can create a submarket and deliver higher value to that specific target group

Focus on a niche. The niche strategy were used by almost all recent startups in the online dating industry, even those that today are not niche sites. Tinder is now a mainstream site, but they initially targeted college parties and other big social events until reaching a critical mass of users.

An attractive niche strategy is to focus on a geographical niche. The Dating Ring started in a single city and launched one city at a time. Such a strategy can be imitated easily for most other dating concepts.

The niche strategy can be used as a temporary early phase strategy, where the niche focus is gradually reduced to include a broader target each time a critical mass in the submarket is reached.

Innovate on the core concept of dating to differentiate from existing sites and gain high word of mouth engagement

Be unique. The dating ring and Tinder are both good examples of companies doing something differently than the incumbent firms. Tinder changed the matching process and limited the discomfort of being rejected. The Dating Ring changed the concept of online dating completely and offered a very different service.

Being unique can effectively be combined with a niche focus as in the case of Dating Ring. It can also be a transition as in the case of Tinder. Being unique will lead to more media coverage, as new unique concepts are a lot more likely to be picked up by journalists and bloggers. The more word of mouth engagement and the more attention from the media, the more the brand strength will increase. As brand strength increases so will the trust and credibility towards the brand.

Screen or verify new members and prevent spamming

Screening and spam prevention. An increasing problem for dating sites, in particularly those that provide free access are spam bots and scammers or opportunists such as corporations looking to advertise a product. Technology to verify members to be real persons as well as anti-spam measures should be implemented. This area should draw considerable attention for new startups, as there currently are very little real consideration from existing dating sites. A validation system

including both social as well as government issued verification would be obvious innovation paths to consider.

Focus on nurturing trust and credibility by following the eight drivers of trust

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There are many bad or even semi-fraudulent dating sites and increasing trust is important to ensure users will not only spend time signing up, but also later on spend money on the services. Each of the eight drivers of trust should be used as a worksheet that a dating service iteratively performs a reality check on and ensures they are satisfactorily realizing them.

Attract customers by offering free initial access and introduce freemium inspired revenue models after reaching critical mass

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Offer free access. Since multihoming is highly likely in the dating industry, this should be exploited by startups. Offering free access to their service might attract members of other dating sites to multihome and try it out. The free access for basic membership will ensure that members of other dating sites does not incur extra cost from being member on multiple sites.

The free access approach can be changed later or could be preserved and money earned from a freemium model, a transactional model, advertising model or by selling virtual goods.

8   Conclusion

The starting point of this paper was to discover and analyze existing dating sites to reveal if any particular successful strategy could be developed for startups to adopt. First, the industry was analyzed and five dating sites were selected for an in-depth case analysis. A framework for categorizing dating sites was developed and 35 of the major players were identified and categorized in it. Then the theory and analysis was applied in the discussion to compare, contrast and reason out key knowledge. Finally, seven recommendations were contributed based on that knowledge. The recommendations increase a startup's chance of successfully entering and competing in the online dating industry.

A limitation of this study is the limited methodological triangulation in use of secondary data sources. While the research method supports the chosen case study approach, it could have been supported by interviews with the key case companies. However, attempts to get a response from the major dating sites were not successful. As for the data we gathered, particularly the numbers that each site boasted at one point or the other, are vanity metrics for the most part. That makes it difficult to create an actual comparison between the different sites and determining the extent of their success. It does however provide a view of the growth in that individual site. The findings have limited generalizability, which would be criticized by positivists. However, as described in the research method section, as critical realists we acknowledge the applicability of contextual research.

The findings can be used for further studies in the online dating industry with additional industry data and cases not included in this thesis. The purpose we suggest could be to discover new startup strategies when creating and maintaining a consumer user base. Any additional research however, should recheck our framework and our identified dating sites, as new technologies could have been introduced or existing sites could have adopted new concepts or changed their market focus. Finally, the framework could be a starting point in another industry that has similar constraints and dynamics.

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10 Appendix

10.1 Appendix 1 – Pricing in two-sided markets

We define a two-sided market platform with two customer groups A and B. For now, we assume that consumer group A is more sensitive to price than consumer group B.
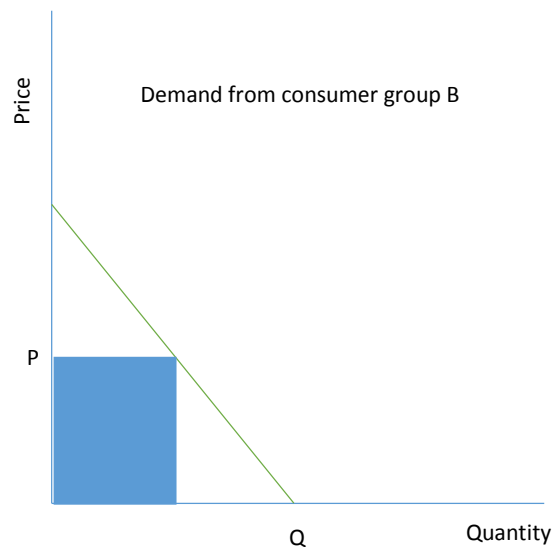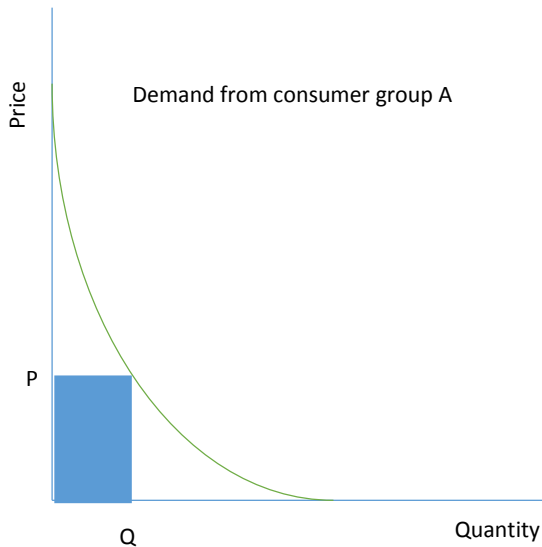
The graphs show how profit is optimized for single markets seen in isolation. Each market is optimized where the blue rectangle is largest. P is the optimal price and Q is the quantity that are sold to that price.

When network effects are taken into accounts, a price change in one market will shift the demand function in the other market and thereby changing the optimal price in the other market.
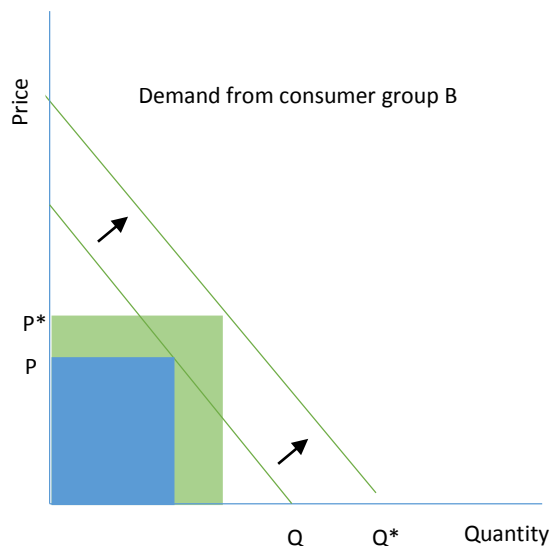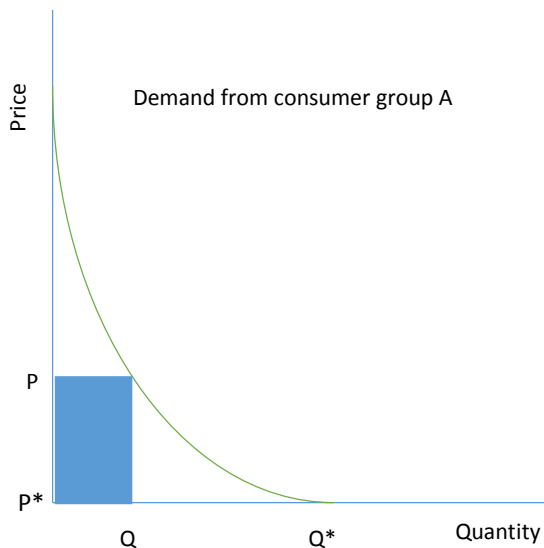
As the new graphs shows, lowering the price in market A to below isolated optimal price (in this case zero price) results in more profit in market B because of the increase in demand.

10.2 Appendix 2 – POF page views and revenue data
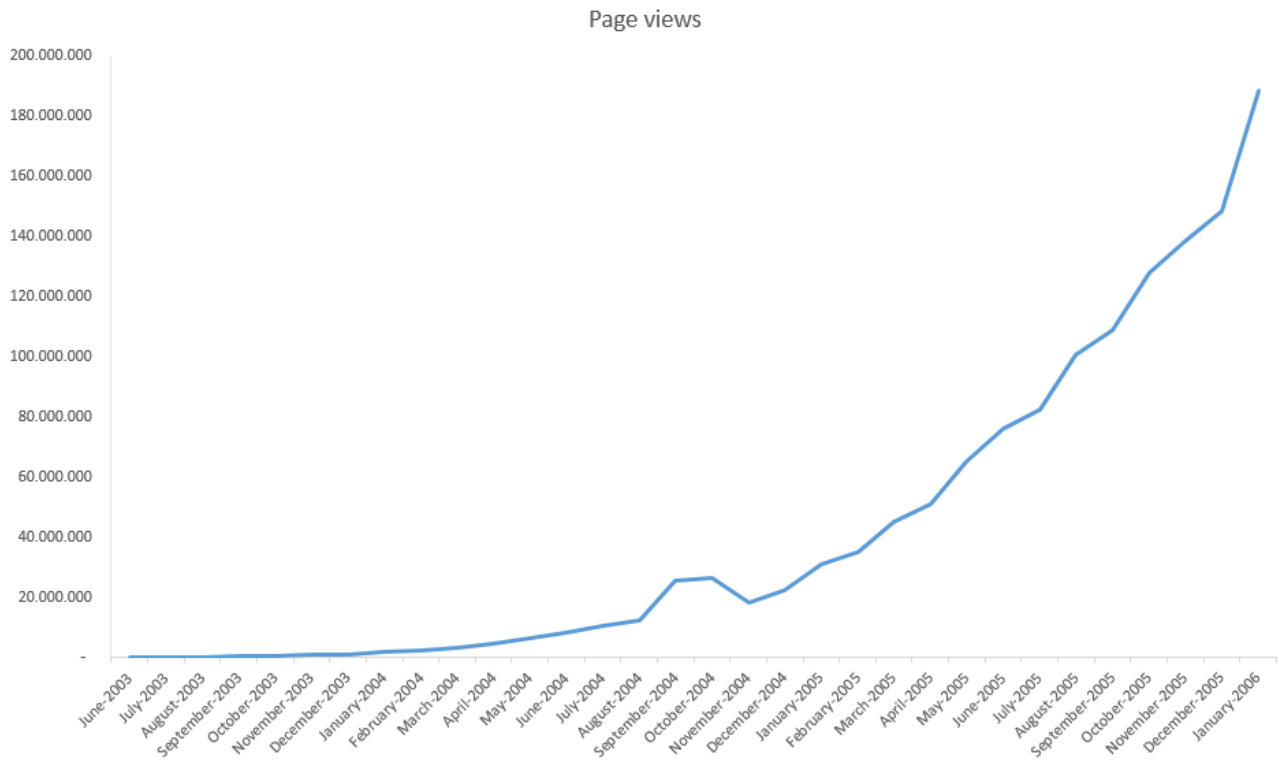
Page views

Month ↑	Page views	Clicks	Page CTR	CPC	Page RPM	Estimated earnings
Jun 18, 2003 – Jun 30, 2003	493	12	2.43%	CA$0.63	CA$15.41	CA$7.60
Jul 1, 2003 – Jul 31, 2003	182,404	2,093	1.15%	CA$0.82	CA$9.42	CA$1,718.90
Aug 1, 2003 – Aug 31, 2003	213,161	2,213	1.04%	CA$0.65	CA$6.79	CA$1,447.14
Sep 1, 2003 – Sep 30, 2003	276,794	2,552	0.92%	CA$0.64	CA$5.89	CA$1,630.97
Oct 1, 2003 – Oct 31, 2003	444,234	4,326	0.97%	CA$0.66	CA$6.46	CA$2,867.57
Nov 1, 2003 – Nov 30, 2003	888,072	6,246	0.70%	CA$0.62	CA$4.38	CA$3,890.32
Dec 1, 2003 – Dec 31, 2003	982,732	7,128	0.73%	CA$0.62	CA$4.46	CA$4,387.27
Jan 1, 2004 – Jan 31, 2004	1,687,976	17,577	1.04%	CA$0.51	CA$5.30	CA$8,940.28
Feb 1, 2004 – Feb 29, 2004	2,084,251	26,309	1.26%	CA$0.48	CA$6.05	CA$12,604.09
Mar 1, 2004 – Mar 31, 2004	3,396,481	40,690	1.20%	CA$0.42	CA$4.99	CA$16,937.10
Apr 1, 2004 – Apr 30, 2004	4,459,734	55,708	1.25%	CA$0.48	CA$5.98	CA$26,676.21
May 1, 2004 – May 31, 2004	6,285,067	61,187	0.97%	CA$0.60	CA$5.88	CA$36,983.05
Jun 1, 2004 – Jun 30, 2004	7,971,841	81,121	1.02%	CA$0.59	CA$5.98	CA$47,682.86
Jul 1, 2004 – Jul 31, 2004	10,662,384	93,033	0.87%	CA$0.59	CA$5.11	CA$54,520.56
Aug 1, 2004 – Aug 31, 2004	12,447,822	99,198	0.80%	CA$0.55	CA$4.36	CA$54,307.38
Sep 1, 2004 – Sep 30, 2004	25,704,435	117,080	0.46%	CA$0.46	CA$2.08	CA$53,549.59
Oct 1, 2004 – Oct 31, 2004	26,538,367	128,052	0.48%	CA$0.34	CA$1.63	CA$43,382.05
Nov 1, 2004 – Nov 30, 2004	18,026,395	107,969	0.60%	CA$0.32	CA$1.93	CA$34,723.32
Dec 1, 2004 – Dec 31, 2004	22,166,755	120,961	0.55%	CA$0.32	CA$1.75	CA$38,693.25
Jan 1, 2005 – Jan 31, 2005	31,101,613	166,208	0.53%	CA$0.38	CA$2.03	CA$63,191.82
Feb 1, 2005 – Feb 28, 2005	35,115,356	161,014	0.46%	CA$0.60	CA$2.76	CA$97,000.26
Mar 1, 2005 – Mar 31, 2005	44,917,356	195,249	0.43%	CA$0.46	CA$2.01	CA$90,289.21
Apr 1, 2005 – Apr 30, 2005	50,817,436	204,500	0.40%	CA$0.56	CA$2.26	CA$114,720.99
May 1, 2005 – May 31, 2005	65,246,553	204,024	0.31%	CA$0.75	CA$2.36	CA$154,008.81
Jun 1, 2005 – Jun 30, 2005	75,999,284	237,617	0.31%	CA$0.58	CA$1.81	CA$137,360.30
Jul 1, 2005 – Jul 31, 2005	82,643,360	288,635	0.35%	CA$0.44	CA$1.54	CA$126,897.09
Aug 1, 2005 – Aug 31, 2005	100,600,315	290,921	0.29%	CA$0.56	CA$1.62	CA$162,502.23
Sep 1, 2005 – Sep 30, 2005	108,975,167	245,653	0.23%	CA$0.87	CA$1.97	CA$214,710.26
Oct 1, 2005 – Oct 31, 2005	127,871,880	292,688	0.23%	CA$0.69	CA$1.57	CA$200,720.36
Nov 1, 2005 – Nov 30, 2005	138,332,749	300,898	0.22%	CA$0.73	CA$1.59	CA$219,403.63
Dec 1, 2005 – Dec 31, 2005	148,316,126	443,491	0.30%	CA$1.01	CA$3.01	CA$446,555.14
Jan 1, 2006 – Jan 31, 2006	188,800,540	556,324	0.29%	CA$0.83	CA$2.46	CA$463,895.16

10.3 Appendix 3 – Mobile Industry

The global amount of internet users and the correlation between desktop and mobile usage are seen in Figure 43. As can be seen the total amount of mobile users surpasses desktop users in 2014. This trend is expected to continue further increasing the importance of mobile on sheer numbers alone.
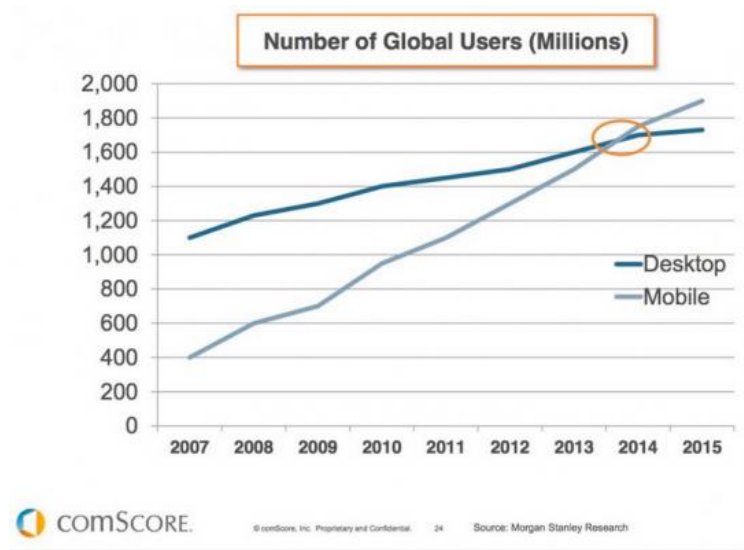
Figure 43 - Web vs Mobile[211]

For retail, there has been a general trend of growth for multi-platform use even with a decline in web usage overall. In Figure 44, we see the group that has both a desktop and a mobile device increase from July to December. This means that more and more desktop users gain a mobile device in addition to their pc.
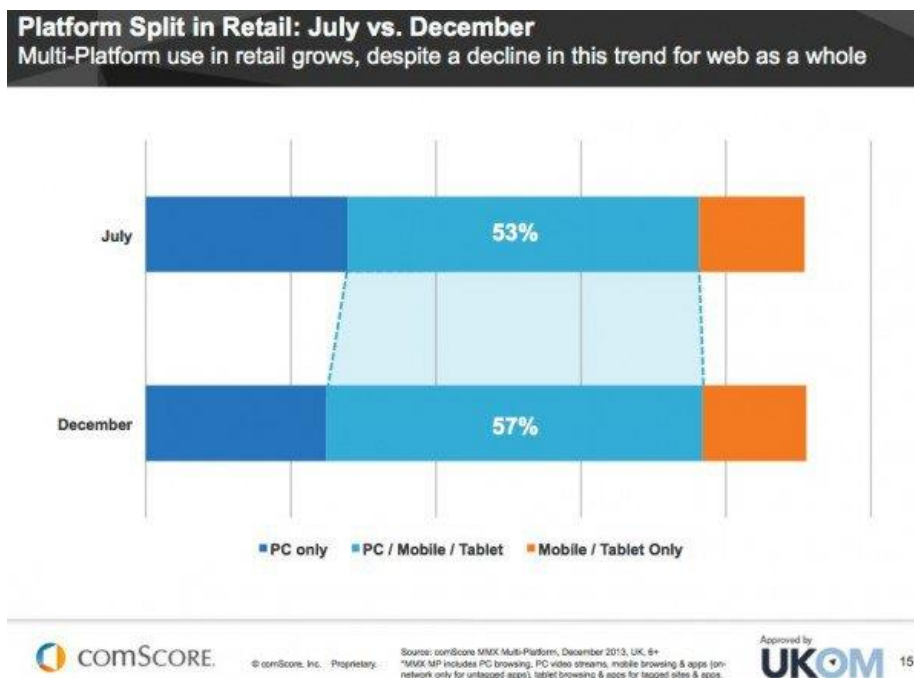

Figure 44 - Platform split in retail[211]

Companies with only a web presence needs to develop a mobile app as is clear from Figure 45. Here we see that mobile users spend 89% of their time on apps and only 11% on web through mobile. That means that it is not enough for companies with only a web presence to simply make a mobile optimized webpage for their users, an app is required for any meaningful engagement.
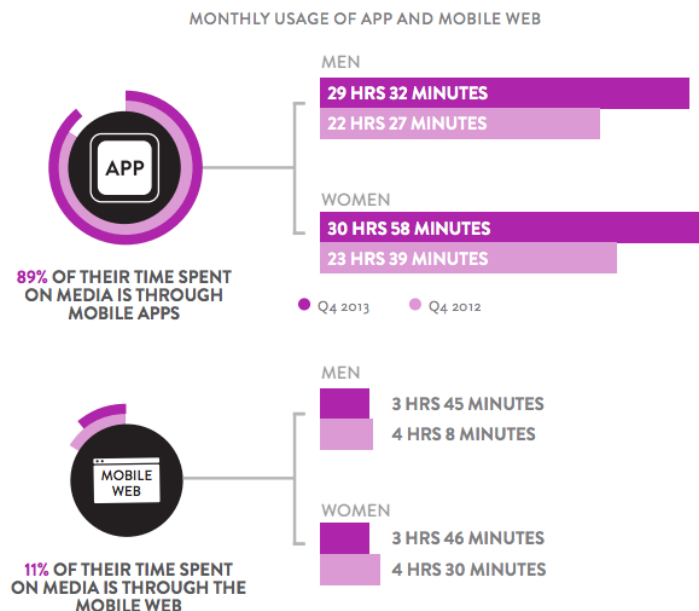
10.4 Appendix 4 - Dating mobile app rankings

App rankings are based on appannie.com results for the US iOS market only. The table represents aggregated numbers from three app categories. The categories have been adjusted so they relatively fit the popularity even if they are not listed on the main Social category by looking at the Overall and Lifestyle ranking. If the website does not have an app, it will have a shared 9999 rank.

Dating site	Overall	Social	Lifestyle	Mobile #
Tinder	83		5	1
Plentyoffish	213	23		2
Match		35		3
Badoo		37		4
OkCupid		43		5
Zoosk		47		6

Down	1230		95	7
Coffee Meets Bagel	1453	91		8
AYI	1462		237	9
Hinge	1466	92		10
eHarmony		150		11
Ashley Madison		234		12
Speeddate		244		13
HowAboutWe		361		14
Grouper		396		15
PlanetRomeo		558		16
Adult Friend Finder		642		17
Beautifulpeople		741		18
DateMySchool		989		19
TrintMe		1029		20
LavaLife		1434		21
Carrot Dating		1437		22
Gleeden		1490		23
AnastasiaDate				9999
Chemistry				9999
Dating Ring				9999
Matchmaker				9999
Meetic				9999
Perfectmatch				9999
Tastebuds				9999

10.5 Appendix 5 - AdBlock Plus monthly active users

Figure 46 - Adblock Plus monthly active users

10.6 Appendix 6 - Other key companies in the industry

In addition to our primary cases, we found several other dating sites to be significant in terms of industry strength, as a comparison to our primary cases or as a help to deepen the understanding of the dating industry and the various factors affecting it. We give short introductions to the relevant parts for the key companies where they either bring context or enable comparisons in the industry or for an individual company. Some of these sites are also mentioned in the discussion.

10.6.1 eHarmony

Launched in August 2000, eHarmony was created to specifically target people looking for long-term relationships. Besides the dating site, eHarmony also operate eHarmony Labs, a relationship research facility as well as publishes on their relationship advice website eHarmony Advice.[212]

The premise of eHarmony is the psychologist and author of relationship books Neil Clark Warren's model of compatibility, which was based on three years of research. The model describes 29 characteristics that can predict who are compatible with who and therefore lead to lasting and fulfilling relationships.[213]

Having been profitable since 2004, eHarmony passed $1 billion in cumulative revenue and a yearly revenue of $100 million in 2009 from their 20 million registered members.[214] However, in 2012

the 78-year-old former CEO and founder Neil Clark Warren returned from his retirement, as eHarmony had been experiencing decreasing signups, retention rate and time spent on the site. The reason they were struggling was the increasingly competitive market and a seemingly slow responding organization.

First action for Warren was to downsize the board of directors from nine to two, himself and one other director. He named a new CFO, CTO, COO and head of the PR department. He also downsized the organization from 260 to 160 employees, leaving only 15% of the staff with more than five years in the company. They held 13.6% of the market share, compared to IAC and its dating sites holding 23.7%.[215]

In March 2015, the company reached the highest amount of paying subscribers in its company history totaling 778,000. Almost broke three years ago, users were now matching 15 million times a day, which was up from 5 million only a year ago. When asked why things went wrong Warren answered *"[…] users started seeing us more like the other dating sites Match and Zoosk, when we're really a social science site. We were never meant to be a dating site. We were meant to be a matchmaking site. I think our leadership lost sight of that, too"*.[216]

10.6.2 Howaboutwe

As a relatively new dating site launched in 2010, Howaboutwe focuses on the date itself instead of any particular algorithm. The way it works is for a user to post their idea of a good date and another user to respond to that date idea if they like it. In that sense it is up to its members to sort through what dates they would like to go on and which they would rather not, including the usual physical and visual stimuli. Previously they had two main products Howaboutwe Dating and Howaboutwe Couples. The couple's portal is for existing couples and allow them to book and pay for already established events.[217]

In 2014, IAC acquired the dating part of Howaboutwe with the couple's part remaining in the hands of original Howaboutwe employees. This was despite earlier comments from co-founders Aaron Schildkrout and Brian Schechter, who said they wanted to create a company focused solely on love to combat IAC. No terms were disclosed.[218]

10.6.3 OkCupid

OkCupid was originally a user generated quiz and personality test site that had a Myers-Briggs style "Match Test" on their site called TheSpark. After the popularity of the Match Test, a beta site called SparkMatch was created, that allowed matched users to message each other. The founders, where one of them was Sam Yagan (CEO of Match), launched the product under the name of OkCupid in March 2004.

With a history of tests and data, OkCupid have been running social experiments on its platform for over a decade. Some of these tests changed the expected results for users by having them match with users that the algorithm originally deemed unfavorable.[219] This was done in the same way that Facebook, who was recently criticized for purposely changing the experience for users, ran psychological studies on a portion of their user base.[220]

OkCupid have been running a blog called OkTrends that has statistics and observations for a decade. It has however seen very little output in the last couple of years; from 2011 until 2014, nothing was posted. There are no explanation as to why they have stopped writing about what they originally built their business idea on. Nevertheless, a big impact has been that they are no longer featured in newspapers or dating blogs as previously when they came out with new and interesting information about dating.

10.6.4 BeautifulPeople

BeautifulPeople launched in 2002 and was initially a local Danish dating site. The focus was on the market for beautiful people or at least those that the majority found beautiful. When a new user signs up for BeautifulPeople, they must upload a profile picture during the registration. The picture will then feature with other new users on a list, where existing users of the opposite sex vote if they want that user to be accepted or rejected. For a period of 48 hours, the needle will move back and forth, as users vote.[221]

After achieving success in Denmark, BeautifulPeople launched internationally in the US and UK in 2005 and went global in 2009. It has sparked a lot of controversy as it encourages an elitist culture as well as an unpleasant signup process. However, the founder of the site, Robert Hintze says that it is the most honest of all dating sites because in the end all that matters is your appearance, at least when it comes to contacting another user. Only around 20% of all new users make it through.

If you do not succeed at first, keep trying and keep improving yourself as it definitely can happen after some time, even "… as many as 50 times, the number it took for one Danish woman to be deemed worthy. After three years of working out, her body got really good-looking".[222]

After achieving great success with their main site, BeautifulPeople created an exclusively gay version in 2012. With the problems gays were facing in the US, they launched a satirical campaign featuring look-a-likes of *"[…] Michele Bachmann marrying Sarah Palin and Donald Trump marrying Mitt Romney with President Barack Obama as the priest"*. This of course was designed to cause an uproar among the conservatives and provide media coverage. Many of these billboards were banned and taken down by protestors, instead BeautifulPeople drove trucks with the billboards placed in the back around in New York and garnered even more attention.[223]

There has been several media appearances when they have excluded members from gaining weight or becoming too ugly (aging) in later profile picture updates.[224] [225] Additionally, a security virus in 2011 allowed over 30,000 people to gain access to the site without having been voted Beautiful. After the issue was discovered, BeautifulPeople excluded everyone and set up a helpline for people who falsely thought they could call themselves beautiful. The virus was subsequently named Shrek after the animated film. [226]

10.6.5 JDate

The first dating site oriented towards the Jewish community launched in 1997 by Joe Shapira and Alon Carmel.[227]

Even though it is oriented towards the Jewish community, non-Jewish are also welcome on the site in the case that they are specifically looking to date Jewish people. It is estimated that there are approximately 60,000 non-Jewish members of the 600,000 users. There are however some Jewish users that are unhappy with non-Jews being accepted into the dating pool, as one member puts it "I'm like. Get your own site!"[228]

In the US, there are only about 1.8 million single Jewish adults. About 20% of these are estimated to be on JDate. In 2014, JDate earned over $30 million a year with a 90% contribution margin.[229]

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