RESEARCH ARTICLE



Why Men Stay Single? Evidence from Reddit

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Abstract

In Western societies, a substantial proportion of the adult population does not have an intimate partner. The current paper puts forward an evolutionary theoretical framework, where people stay single for three main reasons, namely the mismatch between ancestral and modern conditions has resulted in several individuals lacking the adaptations necessary for attracting and retaining mates, individuals can increase their fitness by opting out of relationships, and individuals have constraints that prevent them from attracting a mate. The paper attempted to identify the reasons that drive men to be single and to investigate whether they were consistent with the proposed theoretical framework. More specifically, 13,429 responses from a recent Reddit thread were analyzed, and 6794 responses were coded and classified in 43 categories. Among the most frequent reasons that men indicated for being single included poor flirting skills, low self-confidence, poor looks, shyness, low effort, and bad experience from previous relationships.

Keywords Singlehood · Mismatch problem · Mate choice · Mating performance · Mating

Introduction

Being without a significant other is a common state in the Western world. For instance, in 2015 in the UK, 34.5% of the adult population identified as single and has never cohabited or married (Office for National Statistics 2016). In the USA, a Gallup survey found that 64% of adults in the age group 18-29 identified as single and had never married (Gallup 2015). In Singapore, in 2010, 17% of men and 16.2% of women in the age group 40-44 had never been married, numbers which increased considerably to 42.2 and 29.8% respectively in the 30–34 category (Jones 2012). Suggestive of the number of people who are single is the number of people who live on their own. Eurostat estimated that in 2013, single-person households accounted for 31.7% of the private households in the EU-28 (Eurostat 2015). A 2016 census in Canada indicated that one-person households accounted for 28.2% of all households surpassing all other types of living situations (Statistics Canada 2017).

Theoretical Background

Understanding singlehood requires at least two explanatory levels, namely a theoretical and an empirical one. The latter can provide us with several reasons that drive people to stay single, but the former is necessary for enabling us to figure out why these reasons appear in the first place. To use one example, one reason mentioned is poor flirting skills (Apostolou



A more precise prevalence rate of people who are without an intimate partner came from an American study which estimated those who were not in a committed relationship to be 32.7% of the adult population (Pew Research Center 2006). A subsequent replication of this study in 2013 indicated a small increase of this estimate to 35% (Pew Research Center 2013). Similarly, another study employed a nationally representative sample of American adults and found that, about 25% of the participants did not have an intimate partner (Rosenfeld et al. 2015). These prevalence rates lead to the question why there are so many people who are single. It could be, for instance, by choice or because they face difficulties in attracting a partner. A recent study found that both factors are at play (Apostolou 2017). The present study aims to extend this work by examining the reasons for staying single indicated by men in a recent Reddit thread.

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2017). Thus, empirical studies tell us that poor flirting skills prevent people to attract partners, and as a consequence, they stay single. However, our understanding of singlehood is incomplete, since we do not know why so many people have poor flirting skills. Actually, this is not straightforward to answer because, given the evolutionary significance of mating—people who do not manage to attract a partner leave no offspring—we would expect that the vast majority of people would have adequate flirting skills. Apparently, this is not the case, and a theoretical framework is necessary which could explain why. Such a framework has been recently proposed (Apostolou 2015a, 2017), and it will be discussed next.

In sexually reproducing species such as our own, in order to be able to reproduce, individuals need to gain access to the reproductive capacity of the opposite sex. This fact translates into strong selection pressures being exercised on people to evolve mechanisms that would enable them to achieve this goal. Accordingly, we have inherited mechanisms which enabled our ancestors to have gained sexual access to members of the opposite sex, and which presumably would enable us to do the same (Buss 2017). For instance, sexual desire and romantic love are adaptations which have evolved to motivate to attract and retain mates (Apostolou 2016b; Buss 2017).

The evolutionary importance of gaining access to the reproductive capacity of the opposite sex should not be translated to mean that it is never fitness-increasing for sexually mature individuals to be single. In particular, the primary evolutionary purpose of mating is to have children, and children in our species require considerable parental investment before they are able to reach maturity and survive on their own. Thus, it would pay for people not to mate randomly, but to be choosy and prefer mates with qualities beneficial for them, and to avoid those who lack these qualities. For instance, mate-seekers in Western societies tend to prefer individuals who have a good resource-provision potential; they are for example, educated and have a good job (Buss 2017; Fales et al. 2016). Choosiness in the mating market turns mating strategic—it would make sense for people to choose when to enter in the mating market or to prefer to stay out of it.

In more detail, it would pay for people who look for long-term partners to allocate their limited resources, such as time and money, in building their strengths instead of pursing mates. When they have acquired qualities, such as good education and a well-paid job, they may enter in the mating market, having good chances of attracting high-quality mates. Similarly, people may be plagued by a problem that impairs their capacity to attract a mate. For instance, they may suffer from a health issue or have lost their job. Thus, it would not be optimal to try to attract a mate when their chances of success are slim, but it would pay better to attempt to resolve their problems first and, subsequently, to try to get a mate. In addition, good looks constitute a quality which is valued considerably in casual relationships (Buss 2017). Therefore, men

who are not constrained by pregnancy and are good looking may choose not to commit to a long-term relationship, but choose instead to have many different casual relationships. On this basis, in certain instances, it would pay for individuals to stay single because doing so can increase their reproductive success or fitness.

As discussed above, we have inherited mechanisms which enabled our ancestors to gain access to the reproductive capacity of the opposite sex, and which are likely to enable us to do the same today. Nevertheless, this likelihood is compromised by the considerable differences between ancestral and modern conditions, known as the mismatch problem (Crawford 1998; Maner and Kenrick 2010). More specifically, a mechanism that has evolved to serve a specific function in a specific context may fail to serve this function equally well if the context changes drastically, the same way that a car designed for a paved road may not drive well on a non-paved road. Anthropological, historical, and archeological evidence indicates that the mating context has experienced a dramatic change over the last centuries.

To begin with, men form male coalitions in order to fight other men and monopolize their resources, including women, by force (Ghiglieri 1999; Tooby and Cosmides 1988; Trivers 1985). These conflicts could take the form of small-scale raids but they can also escalate to full-scale wars. Anthropological, historical, and archeological evidence indicates that such fights were common in ancestral societies (Bowles 2009; Keegan 2004; Keeley 1996), but are considerably less common in Western societies (Pinker 2011). Accordingly, several mechanisms that have been optimized to work well in this context may not be helpful or can actually be impairing for the contemporary context. For instance, high level of aggression may have turned men to be good fighters in the past, but bad partners in the present (Apostolou 2016a). Similarly, ejaculating soon after penetration could enable ancestral men to reduce exposure to attacks during a raid, but may hinder their capacity to provide adequate sexual satisfaction to their partners in the present (Apostolou 2015b).

Moreover, anthropological evidence from pre-industrial societies, along with evidence from historical records, indicates that in ancestral human societies mating was regulated (Apostolou 2007, 2010, 2012; Broude and Green 1983; Coontz 2006). In particular, young individuals were controlled by their parents, especially their fathers, who would choose spouses for them (Apostolou 2007, 2010). There is also a bias, with daughters being controlled more than sons (Flinn 1988). In such settings, individuals could secure mates from their parents, so mechanisms which evolved to promote mating in this context may not have a similar effect in the contemporary context, where mate choice is not regulated. For instance, men may be good in talking to and impressing older men, but this capacity would not secure them any wives because women choose their own husbands. On the other



hand, men may lack the necessary adaptations to attract women in a free-mate choice context, because such adaptations were not required in an ancestral one, where mate choice was regulated. For instance, good flirting skills were less important since partners were obtained through convincing parents and not through flirting with opposite-sex individuals.

Last but not least, people may face constraints which prevent them from effectively participating in the mating market. For instance, they may face a severe health problem, or may have a serious disability. If the chances of attracting a mate are low, it is not optimal for people to sacrifice their limited resources in attracting one. They can increase their fitness better by either saving these resources for a future date, where their constraints would be relaxed, or allocate their resources in addressing their constraints (e.g., surgery to improve on a disability) or they could divert their limited resources to their genetic relatives, such as children from previous relationships.

Overall, in the above framework, there are three main reasons why people stay single: They can increase their fitness by allocating their resources in developing desirable qualities or attracting several casual mates; due to the mismatch problem, they face difficulties, such as having poor flirting capacity, in attracting partners; and they face constraints, such as poor health, that prevent them from being effective mate-seekers. A recent study employed qualitative research methods and identified 76 different reasons that drive individuals to stay single (Apostolou 2017). Subsequently, by using quantitative research methods, in a sample of 1096 participants, it classified these reasons to 16 reason factors and these factors to three reason domains. The three domains were consistent with the evolutionary framework discussed above.

More specifically, in the "Freedom of choice" domain, individuals stayed single in order to enjoy more freedom, have casual partners, and address other priorities, such as advancing their career. In the "Difficulties with relationships," individuals experienced difficulties in starting and keeping a relationship, including poor flirting skills and lack of trust to members of the opposite sex. Finally, in the "Constraints," individuals indicated sexual issues, health problems, and having children from previous relationships, as reasons that made them to prefer to stay single.

Despite the fact that being single is prevalent in Western societies, the research on its causes is thin. One study, confined to one culture is insufficient for understanding the phenomenon in question, and the current research would attempt to address this gap in the literature by investigating the reasons for being single in a different sample using a different method.

Method

For the purpose of this research, we analyzed the responses from a recent Reddit thread. More specifically, Reddit is one of the most popular blog sites. For instance, in 2015, Reddit had 82.54 billion page views, 73.15 million submissions, and 725.85 million comments (https://redditblog.com/2015/12/ 31/reddit-in-2015/). Members who are registered can submit diverse content to the site including text, photos, and links to external websites. The different posts are organized by subject into boards called subreddits that cover diverse topics ranging from food recopies to sexual behavior. About a year ago, an anonymous user posted the question "Guys, why are you single?" which received a total of 20,207 responses (https:// www.reddit.com/r/AskReddit/comments/5aeh14/guys why are you single/). For the purpose of our research, we analyzed 13,429 primary responses, that is, responses to the original question. The remaining responses were comments on responses to the original question, which however, had limited value for this study as they involved users' thoughts on other people's responses.

In our analysis, we filtered out the following kinds of responses: Responses which were irrelevant to the question asked, responses with unclear meaning, responses where participants indicated that they were not single, responses where participants indicated they were women. In addition, there were several entries which appeared as deleted—the users had left a response and subsequently they deleted it.

Our strategy for analyzing the responses involved three stages:

Stage 1: Two researchers working in the area examined a large number of responses and attempted to classify them in broader categories of responses, for instance, responses related to looks and responses related to mental health issues. On this basis, specific rules for coding responses to these categories were constructed. In more detail, the two researched examined independently 500 posts, and they attempted to create categories under which the reason for being single could be classified, along with specific criteria for classification to a specific category. Subsequently, the two researchers compared, discussed, and refined their categories and coding rules.

Stage 2: An independent graduate student was recruited and, along with one of the authors, attempted to use the coding rules, in order to classify these responses to broader categories. The purpose of this stage was to improve on the coding rules and adjust the categories; for instance, to examine whether additional categories needed to be constructed, or whether certain reasons were in very low frequency and should not be placed as independent categories, but placed in the "Other" category.

Stage 3: the actual coding took place, where the responses were classified to the agreed categories using the agreed rules. For this purpose, one independent student was recruited (different from the one employed in stage 2), and engaged in the coding along with one of the researchers. The researcher and the student read each post independently, they coded it and subsequently, they discussed their responses with each other.



If there was agreement, they proceeded to the next post, if there was disagreement they attempted to find a consensus, and if a consensus was not reached, a second researcher, who read the post independently, was consulted. If a consensus was reached, they proceeded to the next post. If no consensus was reached, the response was not coded, and they moved on to the next post. The instances where consensus was not reached and the response was not coded were relatively rare, about one in 400 responses.

Results

Using the procedure discussed above, from the stage 3 of our study, we identified 6794 responses which were classified in 43 categories depicted in Table 1. In order to get a measure of importance, we estimated the relative frequencies of each category, and we placed these categories in a hierarchical order, putting the ones with higher frequency first.

"Poor looks," where men indicated that they were single because they were not good looking, was at the top of the hierarchy. Frequent complains involved being short and bald. The "Overweight," found a bit lower in the hierarchy, where men indicated that being overweight prevented them from attracting a partner, needs also to be considered as an aspect of poor looks. Since participants reported their weight very frequently as an issue, it was coded separately from "Poor looks." The "Low self-esteem/confidence" category was second in the hierarchy, followed by the "Low effort," where individuals indicated that they were single because they did not put sufficient effort in getting a relationship. The "Not interested in relationships" was next, where individuals indicated a lack of interest in forming an intimate relationship, with freedom being the most common reason mentioned.

Moving on, we find the "Poor flirting skills," where men indicated that they had difficulties in flirting and talking to women. In the "Introverted," which followed next, individuals indicated that they were not very social, they spent time home and they had solo hobbies, such as playing video games. In the "Recently broke up" category, men indicated that they were single because they were in a relationship which had been recently terminated. Next, was the "Bad experiences from previous relationships," where being hurt in the past was given as a reason for preferring to stay single in the present. In the "No available women," individuals indicated that they would not meet available women, usually because they lived in a small village or city, or because in their work or place of study (e.g., army, engineering major) no women were available. In the "Different priorities," individuals indicated that they were single because they diverted their efforts in doing things other than looking for mates, such as advancing their careers, completing their studies, or resolving a personal issue. Men indicated also that being shy ("Shyness") and being very choosy ("Too picky") as constraints for being in a relationship.

Moving on toward the middle of the hierarchy, in the "Anxiety" category, individuals indicated high anxiety and in particular social anxiety, as a reason for being single. In the "Lack of time," men indicated that they lacked time for having a relationship, usually because they had to work long hours or in night shifts that prevented them to go out and meet people. Being "Socially awkward" was another reason that prevented individuals from getting a mate. In the "Enjoying being single," men indicated that they were single because they enjoyed singlehood, with being able to have sex with many different women to be given frequently as a reason. Suffering from "Depression" and having a "Poor character" (e.g., selfish, jealous, narcissist), were also given as reasons for being single. In the "Difficult to find women to match," men indicated that it was hard for them to find women who would share their interests and would be able to make good dating partners.

Individuals indicated that "Poor mental health" constrained them from getting a mate. Apart from depression and anxiety, which were coded separately, individuals, who indicated that their mental health in general was an issue in relationships or that they had a specific mental health disorder, were classified in this category. Men indicated also their "Lack of achievements" as one factor that prevented them from attracting a partner. In this case, individuals frequently reported lack of education, not having a good job or not having a job at all, and living with their parents as justifications of poor achievement. In the "Stuck with one girl," individuals indicated that they were single because they had feelings for a specific woman who, for some reason (e.g., was in another relationship), was not available. Men indicated also "Lack of social skills" and "Have not got over previous relationship" as further reasons that prevented them from being in a relationship. In the "Don't know how to start/be in a relationship," men indicated that they were unaware about intimate relationships and how they work, which in turn, prevented them from being in one.

The "Lack of money" and the lack of trust in women ("I do not trust women") were also reported as reasons for being single. Moreover, in the "Not picking up clues of interest," individuals indicated that they faced difficulties in understanding whether a woman was interested in them, which in turn, caused them difficulties in pursing women. Men indicated also a "Sexual issue" to prevent them from being in a relationship. The most frequently reported one was a small penis, with lack of sexual desire to be also frequently reported. Individuals indicated a "Fear of relationships" to have prevented them from starting one. In particular, individuals indicated that they feared that they would be trapped or suffer in a relationship, or they would turn fat and lazy if they were to be in one. Considering themselves boring ("I am not interesting") and having a "Fear of rejection," were also given



 Table 1
 Categories and frequencies of responses for the reasons that drive men to be single

Categories	Frequency	Sample responses
Poor looks	662	Cause I am ugly as fuck and have been cursed with awful genetics. Being under 6'0" means I am invincible to women.
Low self-esteem/confidence	544	Because I have massive self-esteem issues, I think I'm worthless, and I don't do social things because I don't want to inflict my stupid, worthless presence on other people. Confidence is the key, and I' m locked out
Low effort	514	I don't put any effort or make any moves. I've never been really all that into actively seeking out a relationship. I've always believed relationships come and go on their own.
Not interested in relationships	424	And no, I'm not saying that I can't get anybody. I actively don't want to be in a relationship. I like my freedom and privacy.
Poor flirting skills	421	I'm completely fine talking to people I have 0 interest in, but if I remotely have a crush on you I'm probably gonna be really fucking awkward. Any semblance of social skills I have go out the window if have a crush on you. My IQ drops to about 40 whenever I talk to women
Introverted	411	My days are spent at work/sleeping/working on projects around the house. The only way I am going to find someone new is if they break into my home while I'm there. Not many women on my way from my room to a kitchen and back.
Recently broke up	363	My girlfriend just broke up with me Because I broke up with my girlfriend 3 hours ago.
Bad experiences from previous relationships	330	My last relationship ended so badly I never want to be in one again. Because my last relationship was toxic as hell and now I avoid relationships to prevent being hurt that badly again.
No available women	319	I have no avenues for meeting women. While being a mechanical engineering contractor is a pretty attractive job to have, you aren't exactly surrounded by women.
Overweight	315	Honestly, as my username suggests-too fat. [username twofat] Cause I'm fugly!
Different priorities	309	I'm focusing on building my career, so I don't have the luxury of dedicating enough time to a relationship right now. Grades before babes.
Shyness	300	Shy. That's pretty much it. Cause I'm too shy to ask anyone out
Too picky	294	My standards are too high for what I bring to the table. To be fair I tend to chase near impossibilities.
Anxiety	283	I get terrible anxiety around women. Overwhelming anxiety whenever I try to speak with any woman I' m interested in.
Lack of time	256	Because I work 6 days a week and on Saturdays I play video games and sleep. Between two jobs is hard to find any time for dating.
Socially awkward	249	I'm too awkward Awkward as fuck.
Enjoying being single	217	I don't value the things that a relationship brings, I value the things that casually dating brings. I usually date girls casually for a month or so then find someone new. Keeps things fresh and exciting for me. I'm lucky enough to be good looking enough to have random women sleep with me. So I'm pretty much going to stay single until my buying power declines and I'm forced to settle down.
Depression	204	Depression kept me from going out and meeting new people for years. Crippling depression.
Poor character	188	My personality is radioactive. I suffered from anger management and also being a huge narcissist.
Difficult to find women to match	171	Have yet to meet a girl who shares my interests who wasn't already with someone else. It is hard to find a woman my age who enjoys the same things, and doesn't have kids already.
Poor mental health	154	I am a high-functioning autist and feel deeply uncomfortable of physical contact. Mental illness
Lack of achievements	146	Because I'm a 41-year-old with all the qualifications and achievements of a 19-year-old. Being a 31-year-old grocery store drone doesn't exactly drop the panties.
Stuck with one girl	138	



Table 1 (continued)

Categories	Frequency	Sample responses
		I'm in love with my best friend, who's had a long distance boyfriend for a few years, and I can't get over her. I want to be with a certain girl so bad that I'm either ignoring my other options or just not taking them seriously.
Lack of social skills	137	Because I have the social skills of a dead goldfish. Zero social skills
Have not got over previous relationship	134	Still kind of in love with a girl who broke my heart nearly 3 years ago. I'm currently mentally addicted to my ex and I can't imagine myself with anyone else.
Don't know how to start/be in a relationship	133	I quite literally do not know how to be in a relationship. I don't know shit about dating and flirting.
Lack of money	131	I don't have money for dates, I barely pay my gas bill. MoneyI don't have a lot of it to treat a lady.
I do not trust women	125	I have trust issues and made the decision to avoid relationships. I'm single because I can't trust women for now.
Not picking up clues of interest	124	I cant tell the difference if a girl is just nice to me or she is in to me. So I kinda let everything slip away. I'm terrible at picking up on signals.
Sexual issue	114	What it lacks in girth, it also lacks in length. I'm asexual and afraid that people with leave when they find out.
Fear of relationships	113	Because women tend to make me very domesticate, fat, and lazy whenever I put a name on it (girlfriend). Because the pain is inevitable. Relationships wear you down and crush your soul.
I am not interesting	103	I am the most thoroughly boring person I know. Dull job (to most people). Dull interests, unremarkable body, unremarkable personality. I'm not exactly the kind of person who interests people.
Fear of rejection	96	The crippling fear of the girl saying no. My fear of rejection stops me in all tracks of wanting to ask any girl out in person.
I will not be a good partner	95	I am scared that maybe I'll not be a good boyfriend since I don't know anything about romantic stuff and what girls like. Because I don't want to bring some poor girl into the depressing pit that is my life.
Attracted to wrong women	87	Every woman who captures my interest is either taken, insane, or both. I have an uncanny knack for being attracted only to girls who aren't single.
Homosexual	86	Because I'm gay and 99% of the people I become attracted to aren't. Gay and in the closet
Given up	85	Many rounds of rejection. Just gave up after a while. I'll be fine on my own. You get tired of being turned down after a while
Is not worth the effort	82	Relationships take a lot of work, I'm not willing to put the effort in. Not worth the immense effort that you need to put in order to even find out if they're interested or not.
Fear of commitment	73	Don't like the commitment a relationship entails Commitment is hard.
Health – disability issue	72	I'm disabled and confined to a wheelchair. Not many girls will settle for that. Because I'm HIV positive.
Difficult to keep a relationship	67	I somehow became unable to maintain any kind of relationship My relationships never last over 3 months. Girls break up with me without ever telling me the real reason.
Addictions	58	I'm young and an alcoholic and no one wants to date an alcoholic. I am single because of my alcoholism.
Other	807	I am not ready Just damn clingy

as reasons for being single. In addition, several men indicated that they were not in a relationship because they thought they would not be good partners ("I will not be a good partner"), with a frequent justification being a health problem.

Moving on toward the bottom of the hierarchy, in the "Attracted to wrong women," men indicated that they were

attracted to women who were not available or who were not a good match for them, and as a consequence, they were single. Furthermore, in the "Homosexual" category, men indicated that they were single because they were gay and were either in the closet or faced difficulties in meeting other gay men. There were also several men who indicated that they had



"Given up" trying to get a partner, mainly due to repeated past failures. Men indicated also that they were single because a relationship "Is not worth the effort," and because they had a "Fear of commitment."

In the "Health – disability issue," individuals indicated a health problem, such as cancer, being HIV positive, or a disability, such as being in a wheelchair, as factors that prevented them from being in a relationship. Moreover, in the "Difficult to keep a relationship," men indicated that they had a hard time keeping a relationship—for instance, they were easily bored. Finally, in the "Addictions" category, men indicated that having an addiction prevented them from being in a relationship. The most common addiction reported was alcohol, followed by drugs.

Less frequent reasons form the largest category, namely the "Other." This category included reasons such as being from a different country, used to being alone, traveling too much, religious reasons, fear of getting a sexually transmitted disease, not being ready for a relationship, not being appealing to the opposite sex, being always rejected, being too old, having children from previous relationships, not having found someone interesting enough, giving up too easily, being clingy, and not being good in relationships.

Discussion

Our study identified 43 reasons for staying single commonly reported by men in a recent Reddit thread. Among the most frequently reported ones were poor looks, low capacity to initiate flirting, and low effort. Frequent reasons included having bad experiences from previous relationships, being picky, not meeting available women, having different priorities, recent termination of a relationship, and poor mental health. Finally, less frequent reasons included sexual problems, health and disability issues, homosexuality, and addictions.

On the basis of our theoretical framework, we propose that the low capacity of men to approach women and to initiate flirting, reflected in reasons such as poor flirting skills, shyness, lack of confidence, not picking up clues of interest, and fear of rejection, which were found in high frequency in the sample, was due to the mismatch problem. More specifically, men indicated that they were single because they had a hard time talking to women: They did not know how to flirt, they could not initiate conversation, had a difficult time picking up clues of interest, were shy, and feared rejection. We can ask whether in a pre-industrial context, where marriages were arranged and/or male-male competition was strong, these same men would be single. The answer is most probably no. Flirting skills were irrelevant because men did not have to flirt with women: Wives were either provided by parents or obtained through force. This being the case, in an ancestral preindustrial context, the selection pressures on flirting skills would be weak, resulting in many of our ancestors having poor capacity for flirting. This capacity has passed to contemporary generations who live in post-industrial societies. Yet, in post-industrial societies, mate choice is not regulated or forced, but people instead find mates on their own. In effect, flirting capacity becomes particularly relevant, with low scorers facing difficulties in attracting mates and, as a consequence, end up being single. Some of these people expressed their difficulties in Reddit, and so these difficulties found their way in our dataset.

A similar argument can be made for the low effort and the pickiness. In particular, making substantial effort to find a partner and having well-refined choosiness mechanisms were not necessary in a pre-industrial context, where mate choice was regulated, since the effort and the choosing were made by parents. Therefore, in an ancestral pre-industrial context, where marriages were arranged, the selection pressures on mechanisms which regulated mating effort and choosiness were weak, resulting in many individuals today facing difficulties in these domains. Consequently, several men want a relationship but they do not make the effort necessary to find a partner, and since partners are not provided by parents, they stay single. Similarly, several men stay single because they are unreasonably picky, going after women they can never get, or they are not efficient in choosing, going for women who are not available or appropriate for long-term partners.

The mismatch argument can partially explain the relatively high frequency of poor looks as a reason for being single. In more detail, one consistently found the area of disagreement between parents and their children over mate choice is looks: Parents ascribe considerably less importance to the good looks in a prospective spouse for their children than their children in a prospective spouse for themselves (Apostolou 2008, 2014; Guo et al. 2017; Perilloux et al. 2011). This difference has the implication that good looks constitute a much less important trait in a pre-industrial context, where parents chose mates for their children, than in a post-industrial context, where children choose mates for themselves. Thus, in an ancestral preindustrial context, selection pressures on mechanisms that regulate how much effort individuals allocate to their appearance and to body traits which are related to attractiveness, had been weak. As a consequence, several individuals may not have an adequate level of looks for a free-mate choice context.

The mismatch problem has also an indirect negative effect on the capacity to attract mates. Only recently, technological advancement has made food readily and consistently available to the vast majority of people living in post-industrial societies. That is to say, in ancestral pre-industrial societies food was scarce, and its supply unpredictable. Mechanisms that regulate food intake have evolved in this context, and they functioned by motivating individuals, when food was available, to eat more than they needed, and save the extra for a rainy day in the form of fat. But in post-industrial societies the



rainy day never comes, and individuals become obese, which in turn prevents them from attracting mates (Breslin 2013).

Social factors may also be at play here. For instance, exposure to movies, TV series, and commercials, which depict unrealistically good-looking individuals, may have resulted in men developing an unrealistic concept about what constitutes good looks. Thus, even if they are not bad looking, they may think they are. This argument indirectly relates to the mismatch problem as movies, TV series, and commercials are evolutionary novel, and people have not yet evolved resistance in not constructing their reality on the basis of output from these outlets.

By far the most common sexual issue reported was a small penis. The size of the penis is positively related to the sexual satisfaction of women (Lever et al. 2006; Mautz et al. 2013). Yet, in a pre-industrial context where mate choice is forced, the size of the penis has little relevance; thus, selection forces in ancestral pre-industrial societies exercised on penis may have been relatively weak, resulting in many men today having penises of inadequate size (Apostolou 2016c). Another reason is over-exposure to porn, where protagonists have above average-size penises; that may have resulted in several men having formed unrealistic points of references; that is to say, they may have average-size penises but still consider that they have a below-average one. For instance, a recent study found a correlation between porn watching and genital selfimage in men (Morrison et al. 2007; see also Prause et al. 2015).

In the proposed theoretical framework, people stay single, at least for some time, because by doing so they increase their fitness. This hypothesis is mapped to the "Enjoying being single" reason, where men indicated that they had a good time being single, with a common justification being that they had the opportunity to have sex with different women. If a man has qualities that enable him to have sex with different women relatively easy, it would make sense for him to opt out from a long-term relationship, at least for some time, and try to use his qualities to sleep with as many women as he can. This argument maps also to the "priorities" category, where men indicated that they have opted out from a relationship, in order to focus predominantly on their studies or their careers. High social status, education, control of resources, and a good job are highly valued by women in a mate (Buss 2017), so it would pay for men to focus their energy on building these qualities, and subsequently to use them, in order to attract high mate value women. Or, after building these qualities, they could continue being single but use them in order to have sex with different women.

In the proposed framework, another reason for staying single is the low chances of attracting a mate. This argument maps to the "health – disability issue," where individuals indicated that they had a serious health problem or some disability, which prevented them from getting a partner. This

argument maps also to the addictions category, where men reported that an addiction constrained them from finding a partner. Similarly, there were certain men whose responses classified in the "Other" category. These men indicated that they thought that having children from previous relationships would turn them undesirable as mates, so they preferred to stay single instead.

Some categories identified in this study were related to the capacity to keep a relationship reflected in reasons such as "Difficult to keep a relationship," "Fear of commitment," and "Fear of relationships." A mismatch problem may be at play here, as the modern geography of mating is very different from the ancestral one, which most likely impairs the capacity of individuals not only to start but also to keep a relationship. Nevertheless, reasons such as "Bad previous relationships," may also reflect optimal response to current environment. For instance, emotional pain from failed relationships may hint to individuals that there is something wrong with their approach to relationships, and motivate them to take some time off, in order to re-evaluate and improve their approach, so as to avoid making the same mistakes in the future. Moreover, the "Stuck with one girl" category may look at first problematic, as individuals seem to be stuck with a woman without prospects. Yet, persistence may be one way to communicate sound interest to women (Buss 2017); thus, instead of a problem, this may be a strategy that can eventually have a good pay off. Future theoretical and empirical work is necessary for improving our understanding of these reasons.

A further evolutionary argument that could be made about singlehood is that, it may be optimal for people to stay single and divert the resources they would allocate to seeking and keeping mates and having children, to helping genetic relatives. In general, the fitness cost of forgoing having children in order to help genetic relatives is higher than the fitness benefit of diverting extra resources in helping genetic relatives, which means that such strategy may not have evolved. There is one exception, however, namely individuals having traits such as a physical deformity or sterility, which would either result in lower chances to be successful in the mating market, or if successful, this success will not be translated into reproductive success. In such cases, people can better increase their fitness by diverting their resources to genetic relatives than to mating effort. Thus, a conditional strategy is likely to have evolved, where people allocate their resources to mating effort, but if the chances of increasing reproductive success in this domain are thin, they divert their resources in helping genetic relatives instead. Future research should investigate this possibility.

A number of reasons identified here are not accounted by the proposed evolutionary framework, at least not directly. That is to say, several reasons did not indicate an issue with attracting women or opting out willingly of relationships. More specifically, one frequent reason for staying single was a recent termination of a relationship—most relationships



eventually end, and it takes some time before individuals establish new ones. Another frequent reason for being single was not meeting available women, due to location or job. For instance, several men indicated that they lived in small villages with no available women, or that they were employed in a male-dominated sector. Similarly, in the "Homosexuality" category, men did not indicate an issue with flirting or willingness to opt out of relationships, but it was rather their sexual orientation which prevented them from having a relationship.

Bella DePaulo suggested that, being single is as preferable or even more preferable than being in an intimate relationship (DePaulo 2017; DePaulo and Morris 2005; for more research on singlehood see Gray et al. 2016; Gray et al. 2015). Yet, our data appear to contradict this proposition. More specifically, for most men in the sample, singlehood appears to be a negative state from which they want to escape but they face difficulties in doing so. In the same vein, another study found that singlehood was positively correlated with perceived stress, specifically the stresses associated with social commitments, loneliness, and economy/money (Ta et al. 2017). Nevertheless, and consistent with our theoretical framework, many men in our sample gave reasons which suggested that they were willingly single. Thus, an answer to the question "is singlehood a preferable state?" which is in accordance with our findings and our theoretical framework is "it depends." For instance, in certain stages of people's lives, such as when they are developing their careers, it may be preferable to be single, while in other stages, as when they have secured a good job, it may not be. A related question is how many people are single by choice and how many are single because they face difficulties in attracting a partner. To our knowledge, there has not been any published study which addresses this question. Yet, on the basis of the current findings and the proposed theoretical framework, we would predict that a substantial proportion of those who are single, are so because they face difficulties in the domain of mating.

Moreover, we need to say that, in general, singlehood is not a permanent state—most people eventually manage to attract a partner. Therefore, what we have identified here are not the reasons that drive men to stay single forever, but the reasons which are likely to drive them to experience prolonged spells of singlehood. There is however the possibility that, if some of these reasons turn to more extreme, or a man happens to have several, it is likely that prolonged spells of singlehood become a more permanent state.

One major strength of the current research is that it provides data from a large number of men who indicated the reasons for staying single at their own initiative and outside the context of an official study. In addition, individuals were not constrained by closed-ended questions, but they freely expressed themselves. Thus, we consider the current dataset to provide very valuable information for an understudied

phenomenon; yet, it has several limitations. To begin with, the current dataset refers only to men, and it does not allow us to investigate the reasons that women stay single. In addition, we lack demographic information about the sample. Our impression is that the answers came predominantly from young men living in the USA, but there were also many men belonging to different age groups and cultural backgrounds.

Moreover, although Reddit is the most popular social news and media aggregation site in the internet, people with certain characteristics may be overrepresented as users. For instance, responses from individuals who are more into computing were likely to be overrepresented in our sample, introducing a bias. For example, it might be that individuals who do not have good interpersonal skills may prefer careers which do not involve people but machines, such as becoming IT experts. This being the case, the high frequency of introversion, social awkwardness, and poor social skills found in our sample may actually be in lower frequency in the population of singles. Furthermore, the nature of the data prevents further statistical analysis, such as factor analysis, that would enable us to identify the relationships between the different reasons and to classify these reasons in broader domains.

Last but not least, a further limitation of the current research is that, our data consist of the reasons that men think that they are single, which may not necessarily be the true reasons that drive them to be single. For instance, a man who lacks confidence may think that he is single because he is not good looking, and reports the latter as reason for being single, although there may be nothing wrong with his looks. Or there may be other reasons such as low achievements that one is pushed out of the mating market, and use poor looks as a justification for singlehood. We think however that most people have an accurate understanding of what drives them to be single, so this is not a major bias.

The analysis indicated that the majority of men who responded to the thread were not willingly single, but instead they wanted a relationship but, for several reasons, could not get one. Many indicated that they experienced severe loneliness and other negative feelings because of that. Demographics across post-industrial countries indicate that a considerable proportion of adult population is single (Jones 2012; Gallup 2015), and our findings suggest that a large portion of the singles is involuntarily single; that is to say, they want a partner but they cannot get one. In turn, this makes the study of singlehood of high importance, especially if one considers the negative emotional impact it can have. The first step is to construct a theoretical framework, in which singlehood can be studied, and investigate the reasons for it within this framework. Recent theoretical and empirical work, along with this current paper contribute to this endeavor, but more substantial work is necessary, in order to understand this complex phenomenon.



The second step, is attempt to develop ways that would enable individual to address the issues that prevent them from entering in a relationship. To our knowledge, there is no such research, but we hope that in the future, researchers will allocate more effort in studying singlehood and how people can become more effective mate-seekers and mate-keepers.

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Compliance with Ethical Standards

Conflict of Interest The author declares that he has no conflicts of interest.

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