

Do You Like Dogs, Cats, Both, or Neither? An Examination of Western Dating Site Users

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Abstract

Prior research found that pet preferences and ownership relates to owners' characteristics, including psychological variation. We aimed to expand this literature. Subjects were OKCupid dating site users who had answered questions for the purpose of improving their matches on the site. We examined the relationship between dog and cat preferences and a broad selection of psychological traits scored using ad hoc scales of questions found in the dataset. Results were in line with prior research. People who prefer dogs were higher in extraversion, conservatism, desired and actual number of children, and mental health, while those preferring cats were higher in intelligence, enjoyed discussions more, and read more books. These associations were robust to controls for age, sex, and location.

Keywords: Pet preferences, psychological traits, fertility, political ideology, intelligence

1 Introduction

About 46 % of US households have a dog, and 32 % have a cat (Association, 2024). Humans have been living and co-evolving with these and other species for thousands of years. Dogs seem to be one of the first species that were domesticated, maybe as early as 40,000 years ago and no later than 15,000 years ago, while cats were domesticated perhaps 12,000 years ago as the first humans transitioned to farming (Nilson et al., 2022; Perri et al., 2021; Tancredi & Cardinali, 2023). The fact that dogs were domesticated prior to the farming transition while cats were domesticated afterwards speaks to their roles living with humans. Dogs are useful for hunting and for protection against predators and hostile humans, while cats protect stored food against rodents, which is primarily useful for farmers. Because of these ancestral relationships, we might expect that there are differences among humans in preferences for one kind of pet over the other, related to the kinds of labor that humans prefer.

There is a small literature exploring how human traits relate to pet ownership and preferences (Gosling et al., 2010; Guastello et al., 2017; Kidd & Kidds, 1980). Prior studies in the Big Five framework found that self-identified dog people were more extraverted, agreeable, conscientious and emotionally stable (lower neuroticism) but lower in openness to experience, with analogous results for the Cattell 16PF dimensions. Furthermore, cat people had higher intelligence. These patterns correspond roughly to the socially adapted, conservative average Joe/Jane versus the leftist, creative but neurotic, intellectual. These broad stereotypes also correspond to stereotypical behavior of the pets themselves to some extent, with dogs being generally less neurotic and more social. Some research finds congruence between owner personality and pet personality, even when using peer judgments instead of self-ratings for both dogs and owners (Turcsán et al., 2012). Owners of aggressive vs. non-aggressive dogs score higher on Eysenck's psychoticism scale Wells & Hepper (2012), and others find that third party observers are able to match up dogs and owners even when photos of them are taken in independent settings (Roy & Nicholas, 2004). Some of these findings have been replicated in multiple studies, whereas others are more in doubt (Bender et al., 2025).

In general, it seems that the pro-similarity patterns seen in the formation of human friendships (social homophily) and dating choices (assortative mating) are seen for pet owners and their pets Payne & Jaffe (2005). If this pattern was true also in human history, it would mean that dogs and cats may have been

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bred for similarity to humans in general, and that specific breeds may have been selected to be similar to those humans who worked in the kind of work the dogs were bred for. The purpose of the present study was to add to this literature using a large, high-powered dataset with many different personal characteristics of the humans.

2 Data and Methods

Subjects were dating site users on the OKCupid site. Subjects answered questions in order to be better matched with potential dates through the site's matching algorithm (Rudder, 2015). While many subjects did not answer many questions, some subjects answered over 1000 questions (maximum sample size was 68,371). Data for subjects was scraped (automatically downloaded using a script) from the website around 2016 and published as an open science dataset (Kirkegaard & Bjerrekær, 2016). During scraping, subjects with more questions answered were preferentially scraped as they would provide more data for research, though this causes more selection bias. Most subjects were from the Western, English-speaking world (English-speaking 85 %, Western world 95 %, mainly USA, Canada, and the United Kingdom).

The primary question of interest concerning pets was "Are you a cat person or a dog person?" with options: dogs, cats, both, neither (q997). 54,746 subjects answered this question. We sought to measure a variety of psychological traits and behaviors that might relate to dog-cat preferences. However, the questions on the website were not made by professionals, rather users could submit questions. Because of this, the questions do not cover the content of any existing, validated psychological scale, nor do they have consistent answer formats (from 2 to 4 options). Instead, in order to measure traits of interest, we searched the available questions for ones plausibly related to traits of interest. Based on our search, we constructed ad hoc scales for the following phenotypes:

- Conservatism: 15 items. Example: "Is a welfare system a good idea? Or does taxing for it just take money away from hard-working people who earned it?" from "Welfare is mostly good" to "Welfare is mostly bad". Reliability = .76.
- Drug use: 7 items. Example: "What's your deal with harder drugs (stuff beyond pot)?" from "I do drugs regularly." to "I never do drugs". Reliability = .82.
- Enjoys discussion: 4 items. Example: "Do you enjoy intense intellectual conversations? yes/no". Reliability = .65.
- Extraversion: 11 items. Example: "Do you like wild parties?" yes/no. Reliability = .76.
- Intelligence: 14 items. Example: "Etymology is..." with 4 options. Reliability = .61.
- Sex/kink interest: 14 items. Example: "How open are you to trying new things in bed?" from "Very Open" to "Not at all". Reliability = .78.
- Mental health: 5 items. Example: "Do you get depressed much?" from "Almost never" to "Despair is my life". Reliability = .43.
- Antisocial behavior: 16 items. Example: "People who throw cigarette butts out of their car window...", "Are not doing any real harm" or "Are being insensitive and/or rude" (reverse scored). Reliability = .50.
- Prudence: 8 items. Example: "Are you careful with your money?" yes/no. Reliability = .49.
- Likes reading: 4 items. Example: "Roughly how many books have you read in the past year?" from "Less than five" to "Fifty or more". Reliability = .67.
- **Religiousness:** 10 items. Example: "Do you believe in God?" yes/no. Reliability = .79.

- Has children: 1 item. Yes/no.
- Ideal number of children: 1 item, Options: 0, 1-2, 3-4, 5+.

Some of these scales had been previously used in other research using the same sample (Dutton & Kirkegaard, 2022; Kirkegaard, 2018; Kirkegaard & Dutton, 2023; Kirkegaard & Lasker, 2020). Each multi-item scale was scored using item response theory using the mirt package (Chalmers et al., 2020). A list of the items in the scales and their factor loadings can be found in the technical appendix (R notebook). Item choices were generally not far from professionally developed items. The example items given in the list above are the items with the strongest factor loadings for each scale. Generally, because of the small number of items and the non-trivial amount of missing data, scores from the scales were only moderately reliable. To offset this problem, data from subjects with at least 500 questions answered were used for the main analyses (max n = 28,651). The estimated score reliabilities for the scales at the minimum of .82 for drug use.

For each outcome of interest, we used regression to determine its relationship to pet preference (in R formula syntax: outcome pet_preference + controls). Linear regression was used for the factor scores while logistic and ordinal regression was used for the binary and ordinal types. As such, the results for the first 11 outcomes are on a comparable scale as the variables were standardized (mean 0, standard deviation 1), while for the latter two, they are in logits. The predictor of interest (dog-cat preference) could be encoded two different ways. In the first, the variable is taken as a nominal variable and the four levels are compared (base level being liking neither). Alternatively, it could be coded as two binary variables, one for dogs and one for cats. The first approach was preferred because unlike the second it would capture any differences that are not additive. People who like both dogs and cats may not have the same outcome average as expected from their liking of dogs and cats. The covariates were varied to see how this affected results. Control variables were age, sex, and optionally location (US or Canadian state/province, or country). The reason for the optionality of controlling for location was that it is not purely an exogenous variable. People move to or from cities as a function of their psychological variation, specifically for the purposes of having or not having a certain kind of pet. Since cats are smaller and require less space than most dogs, they are more suitable to city-living than dogs.

3 Results

The main results are shown in Figures 1 and 2. These are the betas from the linear, logistic, or ordinal regression predicting the outcome in question from the pet preference and the controls.

Results showed a variety of differences. Compared to subjects who answered they liked neither dogs nor cats, dog people were very slightly more antisocial and cat people slightly less. Dog people were more conservative and cat people less. Cat people had greater drug use, especially compared to those who liked neither pet type. Similarly, cat people enjoyed discussions more, while dog people were more extraverted. Liking cats but not dogs predicted higher intelligence. Having children was predicted by not liking either type of pet, but especially not liking cats. On the other hand, liking dogs predicted higher desired fertility, and cats lower. Liking any pet predicted greater interest in sex and sexual kinks. Dog people had better mental health than cat people, but there were no differences in prudence. Finally, cat people read more books, and dog people were more religious.

By comparing the results from Figure 1 and 2, one can see how controlling for residence affects results. The answer is that it didn't matter much, although effect sizes were slightly smaller when the control was added. Thus, the differences observed between dog and cat people cannot be explained simply as a matter of country or state/province level residence (within USA or Canada). Thus, the results do not merely show that inland Americans with bigger houses tend to like dogs more than people living in coastal cities.

By comparing the baseline of "neither dogs nor cats" to "cats only", "dogs only" and "both", one can observe that in some cases the effects don't seem additive. That is, people who like both don't have the average value of "dogs only" and "cats only". Statistically, this interaction effect was beyond chance for



Figure 1: Standardized differences between dating site users as a function of their preference for dogs and cats. Age and sex were controlled, but not location. Results for users who answered at least 500 questions in total (sample size about 26k). Error bars show 95 % confidence intervals.



Figure 2: Standardized differences between dating site users as a function of their preference for dogs and cats. Age, sex and location were controlled. Results for users who answered at least 500 questions in total (sample size about 26k). Error bars show 95 % confidence intervals.

4 of the 13 tests (Bonferroni p < .05). This can most easily be seen when the pet preference was coded using the binary approach, shown in Figure 3.

The blue dots show the interaction effects. Most of these are close to 0 (no interaction), but for some traits, they deviate strongly from 0. The effect is most visible for having any children. The effect of liking cats is strongly negative, while that for dogs is only slightly negative, but liking both offsets this



Figure 3: Standardized differences between dating site users as a function of their preference for dogs and cats coded as binary variables. Age and sex were controlled, but not location. Results for users who answered at least 500 questions in total. Error bars show 95 % confidence intervals. "dogs:cats" (blue) is the interaction term.

to some extent, though not enough to reach 0 effect (the same as liking neither, cf. Figure 1). A similar positive interaction is seen for the desired fertility variable. Thus it seems that having a general pro-pet preference associates with actual and desired fertility, but that for actual fertility, there is perhaps some substitution effect where people get pets instead of children.

To examine whether the imposed selection bias in the form of a minimum of 500 questions answered had an effect on the results, we refit the models without this restriction. This roughly doubled the sample sizes (to about 50,000). However, the findings were quite similar in directions (results shown in the technical output).

To examine whether the findings were plausibly limited to the broadly speaking Western world (any country mainly inhabited by Europeans), we limited the sample to the non-Western world. This resulted in a starkly reduced sample size of maximum 5,629. Results from this analysis are shown in Figure 4.

Some of the results from the full, mainly Western sample did not replicate. For instance, liking either dogs or cats predicted lower conservatism, rather than liking dogs predicting higher as in the main analysis. Other differences were consistent with Western results, for instance that cat people had higher intelligence. Because of the limited sample sizes, most of the confidence intervals were too wide for useful interpretation.

4 Discussion

Our findings were in line with prior research. For instance, we found that cat people tended towards negativity in the form of poorer mental health, whereas prior research has reported elevated neuroticism from the Big Five taxonomy. We replicated the finding that dog people are more extraverted and religious, while cat people are smarter, enjoy discussions more, and read more books. The previous findings in the literature thus appear to be fairly replicable in a different setting.

Our sample size was much larger than prior studies (the largest of which had a few thousand subjects), but this was offset by our generally worse measures of the traits in terms of reliability and their ad hoc nature. As such, the observed effect sizes should be taken more as indicators of the direction of effect rather than exact effect size measures.



Figure 4: Standardized differences between dating site users as a function of their preference for dogs and cats. Age and sex were controlled, and location was limited to non-Western countries (sample size about 5k). Error bars show 95 % confidence intervals.

Aside from the poor reliability of some scales, the study also suffers from selection bias as all subjects were dating site users, mainly from English-speaking and other Western countries. The results may therefore not generalize to other settings, and especially not to non-Western samples. Our results were underpowered to analyze this question in detail.

A general limitation of the OKCupid dataset is that the dataset is only based on subjects who answered their questions "in public", that is, visible to other users. If users selectively hid their responses, did not answer potentially self-incriminating questions, or lied, then the results may not reflect reality. This did not appear to be a large concern in a prior study analyzing antisocial behavior, which showed roughly the same associations as in other studies (e.g., related to lower intelligence) (Kirkegaard, 2018). The fact that the current results also replicated many findings from other samples shows that the selection bias is not a large concern despite the unusual nature of the data.

Supplementary materials

The R code, code output (R notebook) are available at https://osf.io/rav59/. The data are available at https://mega.nz/folder/QIpXkL4Q#b3QXepE6tgyZ3zDhWbv1eg.

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