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Some people are attracted sexually to intelligence: A psychometric evaluation of sapiosexuality

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ABSTRACT

The emergence of the popular culture notion of a sapiosexual, an individual who finds high levels of intelligence (IQ) the most sexually attractive characteristic in a person, suggests that a high IQ may be a genuinely sexually attractive trait, at least for some people. Consequently, mean desirability ratings of IQ on a percentile continuum were estimated, across sexual attraction specifically and long-term partner interest conditions ($N = 383$). Furthermore, we evaluated the psychometric properties of a newly developed measure, the Sapiosexuality Questionnaire (SapioQ). Finally, we estimated the correlation between objective intelligence and the SapioQ. On average, the 90th percentile of intelligence (IQ ≈ 120) was rated to be the most sexually attractive and the most desirable in a long-term partner. However, 8.1% and 1.3% of the sample scored above 4.0 and 4.5, respectively, on the SapioQ (theoretical range: 1 to 5), which had respectable psychometric properties. The desirability ratings across the IQ percentile continuum interacted with the two conditions (i.e., sexual attraction specifically versus partner interest), such that the rater desirability of IQ increased more substantially for partner interest than sexual attraction specifically across the 25th to 75th IQ percentiles. Finally, objective intelligence correlated negatively with rated sexual attraction specifically and partner interest for a hypothetical person at 25th and 50th percentiles of IQ ($r \approx -0.25$). By contrast, objective intelligence failed to correlate with sapiosexuality ($r = -0.02$, $p = 0.765$; $BF_{01} = 12.84$). The results were interpreted to suggest that, for most people, a very high IQ in a partner (IQ 135 +) is not the most attractive level of intelligence, which may be considered supportive of a version of the threshold hypothesis of intelligence. Finally, although sapiosexuality may be a genuine psychological construct, it appears to be influenced by non-intellective factors.

1. Introduction

Intelligence is one of the most highly ranked characteristics in a prospective mate (Buss et al., 1990; Goodwin & Tinker, 2002). However, rank measurement precludes the possibility to evaluate what degree of intelligence in a prospective mate is most preferred. Theoretically, it has been suggested that high levels of intelligence should be valued in a prospective mate, because intelligence represents a broad set of substantially heritable capacities that may offer evolutionary advantages (Barkow, 1989; Miller, 2000). However, it has also been contended that people may only look for "…some level of sufficiency in intelligence…" (Li, Bailey, Kenrick, & Linsenmeier, 2002, p. 953), rather than value incrementally and linearly greater levels of intelligence. In addition to valuing intelligence in a prospective mate (e.g., spouse), the emergence of the popular culture notion of a sapiosexual (a.k.a., sapiophile), an individual who finds high levels of intelligence the most sexually attractive characteristic in a person (Peckham, 2012; Timpf, 2015), suggests that intelligence may be a genuinely sexually attractive trait, at least for some people.

To-date, clear evidence relevant to the value of various levels of intelligence has not been reported, as previous research has used levels of measurement that do not afford unambiguous insights into the issue (e.g., rank-ordering; incomplete Likert-scales). Additionally, the evaluation of sapiosexuality as a psychological construct has not yet been investigated. Consequently, the purpose of this investigation was to measure the desirability of various levels of intelligence with a more fully informative level of measurement (full range percentiles), within the context of sexual attraction specifically and a high-investment relationship (e.g., marriage). Additionally, a psychometric scale was developed to measure individual differences in the hypothesized construct of sapiosexuality. Finally, the possibility that individual differences in objective intelligence may relate positively to individual differences in the rated sexual appeal of intelligence, as well as the rated value of intelligence in a prospective partner, was investigated.

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2. Previous research

In a highly influential study with a sample of 9474 participants drawn from 33 countries, Buss et al. (1990) reported that 'intelligent' was the second most highly valued characteristic in a mate, behind only 'kind and understanding'. The results reported by Buss et al. (1990) have been essentially replicated across a number of different types of studies (e.g., Goodwin & Tinker, 2002; Kamble, Shackelford, Pham, & Buss, 2014; Perilloux, Fleischman, & Buss, 2011). Much of the research in this area is based on the Partner Preference Scale (Buss & Barnes, 1986), which includes 13 conventionally considered desirable traits in a prospective mate or partner. In addition to 'kind and understanding' and 'intelligent', the Partner Preference Scale includes the following traits: 'creative and artistic', 'exciting personality', 'good earning capacity', 'physically attractive', and 'good heredity', for example. The typical use of Buss and Barnes' (1986) Partner Preference Scale requires the respondents to rank-order the 13 traits from least (rank = 13) to most (rank = 1) valued, with respect to their desirability in a prospective mate or partner.

A ranking approach may be considered advantageous, as many of the traits included in the Partner Preference Scale are considered to be possibly attractive qualities in a partner (Buss & Barnes, 1986). Thus, based on a more conventional Likert 5-point scale, it is possible that many respondents would rate most of the 13 traits within the Partner Preference Scale very highly, which would yield mean trait scores with relatively little inter-trait variability. An absence of meaningful variability in scores may preclude the observation of statistically significant effects (Duan & Dunlap, 1997). However, a rank order measurement approach necessarily implies that at least one trait will receive a rank of 1 and one trait will receive a rank of 13, across all respondents.

There are, however, well-known limitations associated with a rank order approach to measurement. In particular, rank order measurement scales are considered less informative than other more continuously scored scales (Pedhazur & Schmelkin, 1991). For example, the rank order measurement approach employed by the Partner Preference Scale does not offer clear insights into what *level* of intelligence is valued in a partner by respondents. Stated alternatively, the relatively high ranking of the trait 'intelligent' reported across several investigations does not necessarily imply that a very high, or even moderately high, level of intelligence was valued by the respondents. Instead, a high mean rank associated with the word 'intelligent' may simply indicate that a moderate level of intelligence was valued by a large percentage of the respondents.

In addition to the rank measurement approach, some of the work by Buss and colleagues included Likert-based data. For example, Buss, Shackelford, Kirkpatrick, and Larsen (2001) used the mate selection values questionnaire from Hill (1945), which includes 'education and intelligence' as one of 18 mate characteristics rated on with 4-point Likert scale: 0 = irrelevant or unimportant; 1 = desirable, but not very important; 2 = important; and 3 = indispensable. Based on an American male undergraduate sample collected in 1996 (N = 226), Buss et al. (2001) reported a mean of 2.40 (SD = 0.65) for the 'education and intelligence' mate characteristic, which was numerically higher than 13 other mate characteristics. Similar results were reported for the female portion of the sample (N = 381). Thus, on average, people rated 'education and intelligence' as somewhere between important and indispensable.

Although additional insights can be gained by the analysis of data derived from a 4-point Likert scale, in comparison to ranking, Buss et al. (2001) acknowledged that the response scale lacked discrimination. Perhaps most importantly, Buss et al. (2001) acknowledged that several of rated mate characteristics were, unfortunately, double-barrelled in nature. For example, the questionnaire combined education and intelligence into a single mate characteristic. Consequently, it is difficult to evaluate the results reported by Buss et al. (2001) with respect to intelligence, specifically. The primary reason Buss et al. (2001) used the less than ideal Hill (1945) measure was to ensure comparability with much older studies in the area, as the investigation had a cross-generational focus.

In addition to the measurement approaches employed by Buss and colleagues, several alternative measurement strategies have been used in the area, some of which may be considered less affected by the limitations described above. For example, Kenrick, Sadalla, Groth, and Trost (1990) asked university students (N = 93) to rate the minimum acceptable level of intelligence in a mate across four levels of relationship involvement: single date, sexual relations, steady dating, and marriage. The students provided ratings on a more continuous level of measurement; specifically, a percentile scale (0 to 100). Kenrick et al. (1990) found intelligence to be a relatively highly rated characteristic in a mate across all four levels of relationship investment. For example, a single date was associated with a mean intelligence minimum expectation of approximately the 50th percentile. By contrast, the most substantial level of involvement, marriage, was associated with a mean intelligence minimum expectation of approximately the 65th percentile. Kenrick, Groth, Trost, and Sadalla (1993) reported comparable effects, based on a similar scale of measurement (see also Regan, 1998). Although perhaps an improvement over Buss et al. (2001), Kenrick et al.'s (1990) method of measurement may be considered limited, as the participants were instructed to consider only minimum expectations of intelligence. Kenrick et al. (1990) did not focus upon desirable or preferred levels of intelligence in a mate, as they assumed there would be ceiling effects.

In another relevant study, Regan, Levin, Sprecher, Christopher, and Gate (2000) administered a modified version of the Partner Preference Scale to a sample of 561 university students. Specifically, Regan et al. (2000) administered a questionnaire of 23 traits (e.g., intelligent, honesty, sexy looking, athletic, etc.) with a 6-point percentile scale: 40th, 50th, 60th, 70th, 80th, and 90th percentiles. Half of the students were asked to specify their percentile preferences across the 23 traits with regard to a partner for a short-term sexual relationship. The other half of the participants was instructed to specify their preferences across the 23 traits with regard to a partner for a long-term romantic relationship. Importantly, however, the participants were instructed to be "realistic" (p. 7), as no one can be expected to be high on all of the traits. Regan et al. (2000) also cautioned the participants to consider that "…extreme levels of some desirable traits may have a negative side" (p. 7). Finally, Regan et al.'s (2000) approach to measurement did not include any percentiles greater than the 90th. Consequently, the results reported by Regan et al. (2000) also cannot provide clear evidence about the degree to which people desire or prefer intelligence in a prospective mate.

Finally, we review an experiment conducted by Li et al. (2002) with a sample of 71 general community participants recruited from an airport. In their first experiment, Li et al. (2002) estimated the amount of a limited 'budget' the participants allocated to various desirable mate characteristics in a prospective partner. The within-subjects factor in the experiment was the fixed total amount of the limited budget: 20, 40, and 60 mate dollars. Li et al. (2002) found that the amount of absolute dollars spent on intelligence remained approximately the same across the 20 and 60 mate dollars conditions (for both males and females). Consequently, Li et al. (2002) suggested that people may simply seek out a sufficient level of intelligence in a partner to carry out day-to-day tasks, rather than a highly intelligent person.

It is useful to contrast Kenrick et al.'s (1990) assumption of intelligence desirability ceiling effects with Li et al.'s (2002) suggestion of sufficiency in intelligence. That is, Li et al.'s (2002) position would imply the absence of ceiling effects, as an IQ of approximately 100 would be considered sufficient to satisfy most people with respect to carrying out day-to-day tasks. We note that Li et al.'s (2002) suggestion of sufficiency in intelligence is reminiscent to the well-known threshold IQ hypothesis. In the area of intelligence, the typically articulated threshold hypothesis represents the notion that the value of intelligence