

A map of desire: multidimensional scaling of men's sexual interest in male and female children and adults

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Abstract

Background. Men sexually interested in children of a specific combination of maturity and sex tend to show some lesser interest in other categories of persons. Patterns of men's sexual interest across erotic targets' categories of maturity and sex have both clinical and basic scientific implications.

Method. We examined the structure of men's sexual interest in adult, pubescent, and prepubescent males and females using multidimensional scaling (MDS) across four datasets, using three large samples and three indicators of sexual interest: phallometric response to erotic stimuli, sexual offense history, and self-reported sexual attraction. The samples were highly enriched for men sexually interested in children and men accused of sexual offenses.

Results. Results supported a two-dimensional MDS solution, with one dimension representing erotic targets' biological sex and the other dimension representing their sexual maturity. The dimension of sexual maturity placed adults and prepubescent children on opposite ends, and pubescent children intermediate. Differences between men's sexual interest in adults and prepubescent children of the same sex were similar in magnitude to the differences between their sexual interest in adult men and women. Sexual interest in adult men was no more associated with sexual interest in boys than sexual interest in adult women was associated with sexual interest in girls.

Conclusions. Erotic targets' sexual maturity and biological sex play important roles in men's preferences, which are predictive of sexual offending. The magnitude of men's preferences for prepubescent children *v.* adults of their preferred sex is large.

Men's sexual interests vary with respect to the biological sex (male or female) and degree of sexual maturation of other persons (Bailey, Hsu, & Bernhard, 2016b; Blanchard et al., 2012). Sexual maturation level can be graded according to the degree of physical maturity (e.g. penile development in males, breast development in females, pubic hair in both males and females) on the five-point Tanner scale (Marshall & Tanner, 1969, 1970). Table 1 presents the four possible categories of erotic targets' sexual maturity, along with their associated Tanner stages, typical age ranges, and the terms for the sexual interests of men whose targets comprise the respective categories. Although each category is associated with a typical age range, the categories are not defined by age but by physical maturation level, as denoted by Tanner stage.

The large majority of men are most sexually interested in adult (i.e. sexually mature) females, and thus are heterosexual teleiophiles. A much smaller proportion, homosexual teleiophiles, is primarily sexually attracted to adult males (Bailey et al., 2016c). Because of societal concern about childhood sexual abuse, a great deal of research has focused on men especially attracted to children. Research has generally supported the distinction between pedophiles (men primarily attracted to prepubescent children) and hebephiles (those attracted to pubescent children) (Bailey et al., 2016b; Blanchard et al., 2009, 2012; Cantor & McPhail, 2015). Both pedophiles and hebephiles usually prefer children of one sex, although pedophiles have a greater tendency than hebephiles to be attracted to both male and female children. Less research has focused on ephebophiles (men attracted to adolescents), perhaps due to the similarity of adolescents in age and physical maturity to adults.

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Variation in sexual interests within individuals

Although men typically indicate strong sexual preferences for persons of one combination of sex and sexual maturity (e.g. adult women and prepubescent males), many also have a capacity for sexual arousal and attraction to persons of other categories. Evidence for this erotic cross-

Table 1. Four categories of erotic targets' sexual maturity with their associated Tanner stages, typical age ranges, and terms for man's sexual interest in them

Target's sexual maturity	Target's Tanner stage	Target's typical age range	Term for man's sexual interest in target
Adult	5	≥17	Teleiophilia
Adolescent	4	15–16	Ephrophilia
Pubescent	2–3	11–14	Hebephilia
Prepubescent	1	≤10	Pedophilia

responsiveness includes patterns of sexual offending (Seto, 2008), phallogometric responses to erotic stimuli (Blanchard et al., 2012; Lykins et al., 2010), and self-reported attraction (Bailey et al., 2016b). Cross-category sexual responding is neither indiscriminate nor random, however. Blanchard et al. (2012) analyzed data from a sample highly enriched for child-attracted men. Data were men's penile responses to erotic stimuli depicting six sex/maturity categories: adult, pubescent, and prepubescent males and females. Blanchard et al. found support that the men's erotic targets followed a unidimensional gradient from adult females on one end, through pubescent females, prepubescent females, prepubescent males, pubescent males, to adult males on the other end. According to their model, men whose erotic targets are any of the sex/maturity categories they considered are most likely to also experience sexual attraction and arousal (albeit to a lesser degree) to adjacent categories, and least likely to experience attraction and arousal to distant categories. For example, a man most aroused by prepubescent girls is likely also to be sexually aroused by pubescent girls and may also be aroused by prepubescent boys (the adjacent categories). He is least likely to be sexually aroused by adult men, the most distant category. The primary feature of the model is its ordering of sex/maturity categories for erotic targets, with adult women and men representing opposite ends of a unidimensional sex/maturity gradient. Prepubescent and pubescent boys and girls are nearer each other on the gradient, perhaps because their bodies are less dissimilar than those of adult men and women.

Using a large Internet sample of child-attracted men who rated their degree of sexual attraction to members of different sex/maturity categories, Bailey et al. (2016b) replicated Blanchard et al.'s (2012) general conclusions. Unlike Blanchard et al., Bailey et al. also assessed attraction to adolescents (operationalized as males or females aged 15 or 16). Attraction to adolescents fit the gradient as expected: intermediate between attraction to adults and attraction to pubescents.

Is the sex/maturity gradient of erotic targets unidimensional?

Results of Blanchard et al. (2012) and Bailey et al. (2016b) both support the utility of the gradient proposed in the former paper in predicting a man's secondary erotic targets from his primary one. Neither study, however, clarified whether the gradient is unidimensional. Alternatively, a two-dimensional structure has *a priori* plausibility, because the gradient considers two kinds of variation in erotic targets: biological sex and sexual maturity. Indeed, Blanchard et al. acknowledged that their results were consistent with the possibility 'that men do indeed perceive sex as a separate stimulus feature in potential erotic objects' (p. 28).

How can this issue be addressed? Multidimensional scaling (MDS) is a data analytic technique for representing similarity of individuals, or of subsets of individuals (Cox & Cox, 2001). The data required for MDS are intrapair distances, or dissimilarities, in attributes of interest. Using such data, constrained by the number of dimensions (N) specified by the data analyst, MDS computes coordinates in N -dimensional space that minimize a loss function called stress. In two dimensions, this solution can be visually represented as a plot in two-dimensional space. Thus, if data from Blanchard et al. (2012) or Bailey et al. (2016b) were used to generate distance matrices among men's preferences for different erotic targets (i.e. adult, adolescent, pubescent, and prepubescent males and females), those preferences could be plotted in two dimensions. The relative range of the two dimensions, and the MDS fit indices, would clarify the value of adding a second dimension to an otherwise unidimensional gradient of sex/maturity.

Several data analytic alternatives to MDS may be usefully applied to similar data, but with different goals. For example, both taxometric and cluster analysis might be used to classify men into groups based upon their sexual interests. Furthermore, taxometric analysis would address the extent to which such groups are best considered dimensionally or categorically distinct. Several taxometric studies of child-attracted men have recently been published, with inconsistent results. Some findings have supported a categorical structure (McPhail, Olver, Brouillette-Alarie, & Looman, 2018; Schmidt, Mokros, & Banse, 2013), while others have supported dimensions (Stephens, Leroux, Skilling, Cantor, & Seto, 2017). In contrast to taxometric analysis, the goal of MDS (in the specific application we envision) is to map men's different erotic targets, and not the men themselves. Such a map can be informative in at least three respects: its optimal number of dimensions, the implied distances between different erotic targets, and the configuration of different erotic targets. We have already discussed the issue of dimensionality. Implied distances between different erotic targets are informative regarding the degree to which men especially attracted to one kind of person tend to be attracted to other kinds of persons. Configuration in an MDS solution is informative regarding the interpretation of dimensions. We are especially interested in the candidate dimensions of age/maturity and biological sex.

The present research

We used four datasets to construct separate distance matrices for use in MDS. Datasets were from three large samples, including those of Blanchard et al. (2012) and Bailey et al. (2016b). In two datasets, the dependent variable was phallogometric response to different erotic stimuli varying in sex and maturity. Such responses are a highly valid window on men's sexual interests, even when men would prefer to hide those interests (Blanchard, Klassen, Dickey, Kuban, & Blak, 2001). In another dataset, it was sexual offenses against persons of different sexes and age ranges, and in the final dataset, it was self-reported attraction to persons varying in sex and age range. Distance matrices were constructed by a numeric transformation of correlations among men's phallogometric arousal, sexual offending, and sexual attraction to individuals representing different sex/age combinations.

Method

Below, we provide the unique sample characteristics and dependent variables of each dataset followed by the general data analytic approach. The online Supplement 1 contains additional information about each sample.

Dataset 1

Subjects

Subjects were 902 male patients previously studied by Blanchard et al. (2002). These patients underwent phallometric testing at the Kurt Freund Laboratory (formerly, Research Section of Behavioural Sexology) of the Centre for Addiction and Mental Health in Toronto, Ontario, Canada, from 1974 to 1995. The great majority of patients were referred for testing by elements of the legal system (e.g. attorneys and probation officers) due to accusations of sexual offending. A much smaller set of patients sought assessment on their own initiative. Importantly, many of the men were accused of sexual offenses against children.

Phallometric assessment

Phallometric assessments involved showing patients a series of potentially erotic stimuli and measuring their penile responses by changes in blood volume. Stimuli were 28-s film clips of nude males or females varying by age and sexual maturity. The persons in the film clips were smiling and walking toward the camera in a non-flirtatious manner. Eight categories of persons were depicted in the film clips: physically mature adult males or females, pubescent males or females, older prepubescent males or females, and younger prepubescent males or females. The assessment comprised of three blocks of nine trials. Each block included films of individuals from the eight sex/age categories plus a neutral stimulus depicting a landscape, presented in a fixed pseudorandom order.

Because males vary in their penis size and penile responsivity, each patient's responses were ipsatized for analysis, in a method that weights both average response and maximum response to each stimulus (Blanchard et al., 2001). Higher scores represent a relatively larger penile response for that subject to a particular stimulus, compared with his other responses.

Dataset 2

Subjects

Subjects were 2278 male patients previously studied by Blanchard et al. (2012). As in Dataset 1, most patients were referred in the context of accusations of sexual offending. These patients were tested at the Centre for Addiction and Mental Health in Toronto, Ontario, Canada between November 1995 and October 2009 (and thus, later than those in Dataset 1). It is possible that a few subjects from Dataset 1 were also in Dataset 2, because they were accused of additional sex offenses and referred again for testing. Such repeat assessments should comprise only a very small proportion of this sample, however. Unfortunately, we are unable to provide a precise count of them.

Phallometric assessment

Phallometric assessments were similar to Dataset 1, except for the stimuli. In Dataset 2, erotic stimuli were 54-s audiotaped narratives presented through headphones accompanied by visual images. Six narratives described sexual interactions with prepubescent boys or girls, pubescent boys or girls, and adult men

or women. The images presented during each narrative depicted nude males or females corresponding in sex and maturity with the topic of the narrative. The full test consisted of four blocks of seven trials. Each block included the six erotic stimuli plus a neutral stimulus, with one trial of each type presented in fixed pseudorandom order.

Dataset 3

Subjects

Subjects were the 2278 patients from Dataset 2, previously studied by Blanchard et al. (2012).

Sexual offenses

A standardized form was used to assess patients' histories of sexual offenses. Sexual offenses in this dataset include charges, convictions, credible accusations, and self-disclosures of criminal sexual behavior. Most information came from documents that accompanied referrals, such as reports from probation and parole officers. Offense-history data were supplemented by information provided by patients themselves, including the number and nature of admitted sexual offenses not resulting in charges. For more information about the assessment of sexual offenses at the Kurt Freund Laboratory, see Blanchard et al. (2003).

The key dependent variable examined in this dataset is the number of patients' male and female sexual offense victims in the following age ranges (and typical degree of sexual maturation): older than 16 years (adult), 15–16 years (adolescent), 12–14 years (pubescent), and less than 12 years (prepubescent). These age ranges were used in a standardized form at the laboratory where data were collected (Blanchard et al., 2003).

Dataset 4

Subjects

Subjects were 1189 men previously studied by Bailey et al. (2016b). They were recruited from Internet sites dedicated to discussing sexual attraction to children.

Attraction ratings

Each man rated his sexual attraction to males and females of the following age categories on a scale from 0 (*no attraction*) to 10 (*maximum attraction*): 10 years or younger (prepubescent children), 11–14 years (pubescent children), 15–16 years (adolescents), and 17 years or older (adults). In order to be included in the dataset, which focused on child-attracted men, participants were required to rate sexual attraction to at least one category of child (i.e. males or females aged either 11–14 years or 10 years or younger) as 5. Thus, all participants had at least moderate attraction to children. This criterion, along with the lack of any legal context of assessment, distinguishes the men of this dataset from those of Datasets 1–3.

Data analysis

Analysis of all four datasets consisted of three steps. First, a Pearson correlation matrix was generated among subjects' responses on the dependent variable for each dataset. Second, correlation matrices were transformed into distance matrices using

Table 2. MDS fit indices for one-, two-, and three-dimensional solutions across four datasets

	R^2			Stress		
	Dimensions of solution			Dimensions of solution		
	1	2	3	1	2	3
Dataset 1	0.664	0.884	0.854	0.394	0.181	0.110
Dataset 2	0.424	0.894	0.884	0.403	0.148	0.078
Dataset 3	0.440	0.788	0.788	0.445	0.228	0.142
Dataset 4	0.693	0.917	0.953	0.355	0.140	0.073

the following formula:

$$\text{Distance}_{ab} = \sqrt{2(1 - r_{ab})}$$

where Distance_{ab} and r_{ab} represent the distance between two variables and the correlation between them, respectively. The correlation-to-distance transformation relies on the fact that the geometric interpretation of the Pearson correlation coefficient is the cosine of the angle between their vectors. The transformation equation follows from simple trigonometry, using the law of cosines. Finally, distance matrices were used to generate one-, two-, and three-dimensional MDS solutions (via the software package JMP Version 14.3), and their fit indices were compared.

Results and discussion

Matrices containing correlations (below diagonals) and implied distances (above diagonals) for each of the four datasets are presented in online Supplement 2, Tables S1–S4. Table 2 contains fit indices (R^2 and Stress) for the one-, two-, and three-dimensional MDS solutions across all four datasets. Better-fitting models will have higher values for R^2 and lower values for Stress. Furthermore, one way of choosing an optimal number of dimensions is to look for an ‘elbow’ in the fit indices (Jaworska & Chupetlovska-Anastasova, 2009). For example, if there is considerable improvement in the fit indices from one to two dimensions, but much less improvement from two to three dimensions, this supports focusing on the two-dimensional solution. This is because it suggests that the two-dimensional solution optimizes the trade-off between parsimony (i.e. few dimensions) and fit (i.e. close correspondence between model and data). For example, the two-dimensional solution for Dataset 1 shows such an elbow for both fit indices. Going from one to two dimensions, R^2 increased by 0.220 and Stress decreased by 0.213. Adding another dimension caused respective changes of -0.030 (that is, R^2 decreased) and 0.070. Thus, we chose the two-dimensional solution for Dataset 1. Similar reasoning led us to prefer the two-dimensional solution for the other three datasets as well. These four solutions are presented graphically in Fig. 1.

A key feature of MDS solutions is relative distance between different objects, which represents how dissimilar they are with respect to the pertinent variable. For example, in Figs 1a and 1b, objects represent erotic stimuli featuring models varying in sex and age. The pertinent variable is men’s phallogometric response to the stimuli. Thus, men who were sexually aroused by models of a particular sex and age tended also to be sexually aroused by the models represented relatively close in distance in

the graphs. The farther away two stimuli are, the less likely that a man sexually aroused by one was also sexually aroused by the other. For example, Fig. 1a implies that men sexually aroused by females aged 3–8 also tended to be sexually aroused by females aged 8–11, but they did not tend to be sexually aroused by males aged 19–41.

Generally speaking, the four solutions depicted in Fig. 1 are visually quite similar to our eyes. That seems remarkable, given the very different variables that generated them, representing superficially quite different phenomena: penile arousal in a laboratory, sexual offense history, and self-reported sexual attraction in a survey. The dimensions for the two-dimensional solutions in all four datasets presented in Fig. 1 are easily and similarly interpretable. The horizontal dimension represents biological sex, and the vertical dimension represents age or sexual maturity. In all four graphs, both dimensions are important, as evidenced by their ranges. In none of the graphs is the range of one dimension much different than that of the other. All are generally consistent with the sex/maturity gradient of Blanchard et al. (2012), in the following sense: if one imagined a string beginning at the oldest females and ending at the oldest males and passing through all the other categories in their order of graphic proximity, that order would be identical between any of our two-dimensional MDS solutions and Blanchard et al.’s unidimensional gradient. Thus, although Blanchard et al.’s unidimensional gradient is certainly useful, our results suggest that a two-dimensional model may be even more so.

The general consistency of the four graphs in Fig. 1 is not only reassuring with respect to replicability, but it is also conceptually reinforcing, suggesting that patterns of sexual arousal, sexual offending, and self-reported sexual attraction are similar. Furthermore, one influential view of sexual offending is that men who commit sexual offenses are partly if not exclusively sexually motivated, and that their victims tend to reflect their patterns of sexual attraction and arousal (Seto, 2008; Seto & Lalumière, 2001). This model underlies the rationale for phallogometric assessment of men accused of sexual offenses. Our results, along with those of many other studies (e.g. Blanchard et al., 2001; Blanchard et al., 2012; Seto, Lalumière, and Blanchard, 2000), support this model of sexual offending.

Clinical implications

The straightforward interpretation of relative distances in MDS solutions allows for potentially important comparisons. For example, it may be clinically and socially useful to understand the strength of child-attracted men’s sexual preferences for

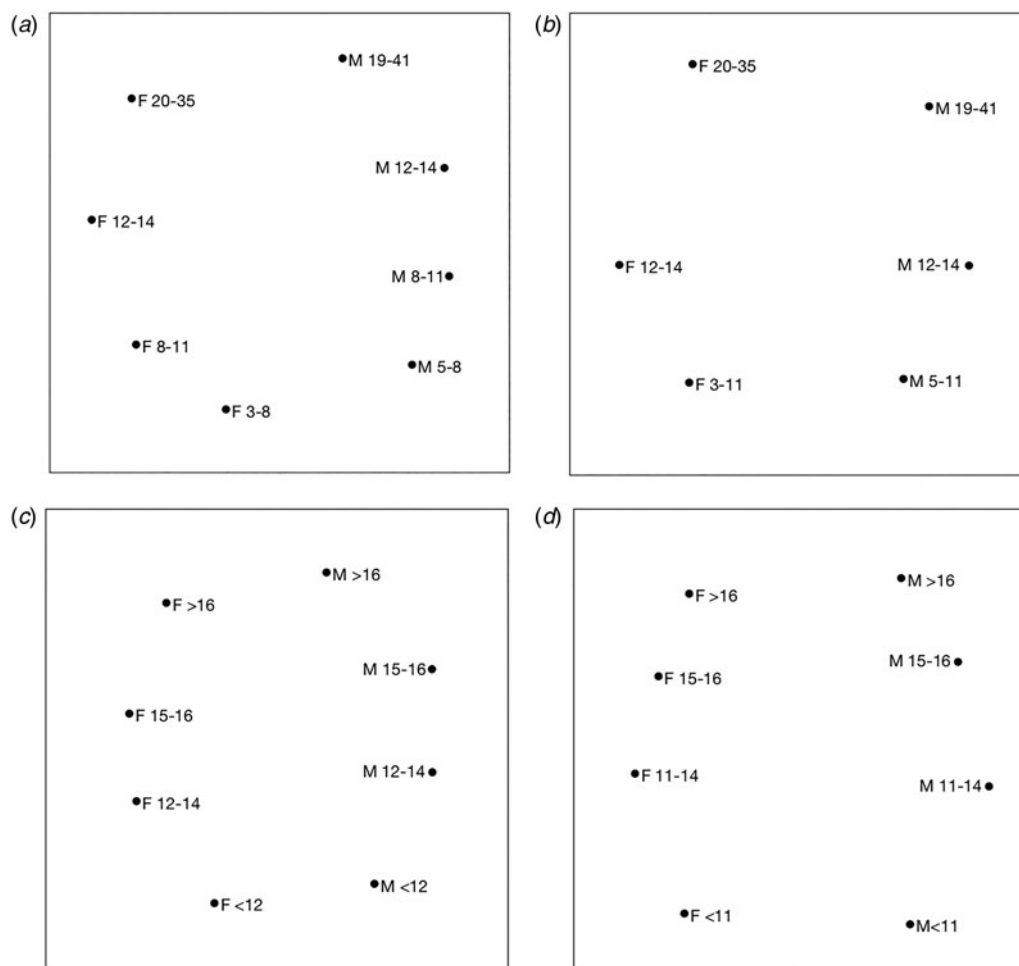


Fig. 1. Two-dimensional MDS solutions for men's sexual interest in erotic targets varying in sex and maturity for (a) Dataset 1, (b) Dataset 2, (c) Dataset 3, and (d) Dataset 4. 'F' refers to female erotic targets and 'M' to male erotic targets. Numbers refer to the age ranges of erotic targets.

children over adults. Research has shown that stronger preferences for children over adults in forensic (Blanchard et al., 2001; Seto, Harris, Rice, & Barbaree, 2004) and community (Bailey, Bernhard, & Hsu, 2016a; Dombert et al., 2016) samples are related to a higher likelihood of sexual offending against children and recidivism of such offending. MDS solutions represent such preferences as distances. These distances are not interpretable by themselves, but they are interpretable relative to each other. One informative baseline distance for comparison is the distance between adult men and women (representing the difference between men's sexual attraction or arousal to men and women). Most men are far more attracted to adults of one sex than to adults of the other sex (Bailey et al., 2016c), and furthermore, most adult-attracted men have a subjective appreciation of the degree of their preference.

Table 3 shows the relative distances across the four datasets between adult men and prepubescent and pubescent boys, and the distances between adult women and prepubescent and pubescent girls, proportional to distances between adult men and women. (Note that these are the distances implied by the MDS solutions rather than the direct estimates from correlations.) Thus, each number provides an index of the degree to which the represented distance compares with the distance between

men and women of the same dataset. Numbers less than 1.0 mean that the distance between prepubescent or pubescent children and adults of the same sex was less than the distance between adult men and women; numbers greater than 1.0 mean the opposite. For example, the first table entry under 'Women v. Prepubescent Girls' is 1.331, meaning that in the MDS solution for Dataset 1, men's phallometric responses to stimuli depicting women v. those depicting prepubescent girls was approximately one and one-third times as large as the distance between their arousal to adult female and adult male stimuli. Across all four datasets, the distances between prepubescent children and adults of the same sex exceeded the distances between adult men and women. In Dataset 3, the adult-child differences were especially large. Evidently, sexual offending against both adults and prepubescent children of the same sex was unusual in this sample, even compared with sexual offending against adults of both sexes. Results from all datasets suggest that strong sexual interest in both children and adults of the same sex occurs no more often than strong sexual interest in both male and female adults.

A second application of our results concerns sexual attraction to pubescent children. During the development of the most recent edition of the *Diagnostic and Statistical Manual of Mental Disorders* [5th ed. (DSM-5); American Psychiatric Association,

Table 3. Relative distances between adults and prepubescent and pubescent children of the same sex, in proportion to the distance between adult men and women

Dataset	Women v. prepubescent girls ^a	Men v. prepubescent boys ^a	Women v. pubescent girls	Men v. pubescent boys
1	1.331	1.296	0.595	0.696
2	1.326	1.140	0.890	0.684
3	1.867	1.934	1.232	1.388
4	1.205	1.305	0.724	0.887
Average	1.433	1.419	0.860	0.914

^aFor Dataset 1, we averaged distances pertaining to the two categories of prepubescent children (older prepubescent and younger prepubescent) within each sex.

2013], the Paraphilias Subworkgroup proposed to broaden the DSM nomenclature to distinguish hebephilia (i.e. attraction to pubescent children) from pedophilia (i.e. attraction to prepubescent children) (Blanchard et al., 2009). The proposal proved controversial, owing to the common objection that there is nothing atypical about attraction to pubescents, and it was eventually rejected (Blanchard, 2013).

To the extent that adult-attracted men also tend to be attracted to pubescents, the relative distances in Table 3 between adults and prepubescents should be much larger than those between adults and pubescents. (The fact that all entries in Table 3 have been divided by the respective distance between men and women does not affect our argument and approach.) This was not the case, however. The distance between adults and pubescent children of the same sex was only somewhat less than that for prepubescent children across all four datasets. That is, for example, adult women and pubescent girls were more similar than adult women and prepubescent girls in evoking men's sexual interest when compared with adult women and men. Still, the adult–pubescent distance was substantial. Averaged across the four datasets, this distance was about 59% of the distance between the adult–prepubescent difference for females and about 63% of the adult–prepubescent difference for males. Thus, on average, pubescents were closer to prepubescents than they were to adults. These results argue against the idea that sexual interest in pubescent children is typical of adult-attracted men, unless one is prepared to make a similar argument for sexual interest in prepubescent children. At the same time, the results support a distinction between sexual interest in prepubescent v. pubescent children.

Table 3 is also relevant to the issue of whether men's attraction to other men predicts sexual interest in children. The belief that it does so – and specifically that homosexual teleiophilic men also tend to be attracted to boys – has sometimes been asserted by those opposed to gay rights (e.g. Baldwin, 2001; Family Research Institute, n.d.). However, results in Table 3 suggest that this belief is false. Specifically, as discussed in the previous paragraphs, the relative distances between men and boys (both prepubescent and pubescent) were similar to the relative distances between men and women. This suggests that men's sexual attraction to other men was no better at predicting sexual interest in boys than their sexual attraction to other men was at predicting sexual interest in women. In addition, Table 3 shows that the relative distances between men and boys (both prepubescent and pubescent) were similar to the relative distances between women and girls. The one exception, for pubescents in Dataset 2, contrasted with the results from the other three datasets, which were in the opposite direction. Thus, in general men's sexual interest in men predicted their sexual interest in boys no better

than their sexual interest in women predicted their sexual interest in girls.

Limitations

The inputs to our MDS analyses are distances derived from correlations, which depend on sample composition. Underrepresentation or overrepresentation of a group (or of a range of a continuous variable) can change the magnitude of correlations and subsequent distances to be input for MDS. The question remains: underrepresentation or overrepresentation compared with what? That is, what is the ideal sample for MDS of men's sexual interests? One possible answer is a sample that is representative of the general male population. None of our samples is close to representative, because they comprised of men either accused of sexual offenses (Datasets 1–3) or recruited for their sexual interest in children (Dataset 4). An alternative is a sample with equal numbers of subjects in all categories of sexual interest (e.g. equal numbers of male-attracted teleiophiles and female-attracted hebephiles). None of our samples qualified in this respect either, although all of them had an overrepresentation of child-attracted men. Indeed, all samples likely comprised of a large majority of men with substantial attraction to children.

Because our samples comprise mixtures of men with varying sexual interests, and because MDS solutions minimize stress across subjects, it is important to emphasize that aspects of the solutions may not be true for particular subsamples. Blanchard et al. (2012) took a somewhat different approach than we do here by representing gradients of sexual arousal separately for men with different, specifically defined, sexual interests. Their results may well be more locally accurate (that is, more applicable to the subgroup of interest). The present results better represent general trends, across groups.

Finally, the data we examined in all four datasets do not allow exploration of sexual interest in the persons outside the maturity levels specifically examined in the three samples. For example, we were unable to examine sexual interest in the elderly (gerontophilia).

Summary and conclusion

Across four datasets comprising three different samples and three different dependent variables, we used MDS to map men's sexual interest in potential erotic targets that vary in sex and sexual maturity. Our results support the idea that both the sex and the sexual maturity of potential erotic targets strongly influence the degree of sexual interest that men manifest in them. Sexual maturity is organized as a gradient, from prepubescent, to pubescent, to adolescent, to adult. A man who is primarily sexually attracted to

persons of a particular combination of sex and sexual maturity (e.g. pubescent females) is most likely to have secondary attractions to persons of the same sex but adjacent levels of sexual maturity (e.g. prepubescent or adolescent females). Our results suggest that with respect to men's sexual interest, adults and children are at least as distinct as adult men and women.

Supplementary material. The supplementary material for this article can be found at <https://doi.org/10.1017/S0033291720001476>

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Conflict of interest. None.

Ethical standards. The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008.

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