

Pedophilia, Hebephilia, and the *DSM-V*

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Abstract The term *pedophilia* denotes the erotic preference for prepubescent children. The term *hebephilia* has been proposed to denote the erotic preference for pubescent children (roughly, ages 11 or 12–14), but it has not become widely used. The present study sought to validate the concept of hebephilia by examining the agreement between self-reported sexual interests and objectively recorded penile responses in the laboratory. The participants were 881 men who were referred for clinical assessment because of paraphilic, criminal, or otherwise problematic sexual behavior. Within-group comparisons showed that men who verbally reported maximum sexual attraction to pubescent children had greater penile responses to depictions of pubescent children than to depictions of younger or older persons. Between-groups comparisons showed that penile responding distinguished such men from those who reported maximum attraction to prepubescent children and from those who reported maximum

attraction to fully grown persons. These results indicated that hebephilia exists as a discriminable erotic age-preference. The authors recommend various ways in which the *DSM* might be altered to accommodate the present findings. One possibility would be to replace the diagnosis of Pedophilia with Pedohebephilia and allow the clinician to specify one of three subtypes: Sexually Attracted to Children Younger than 11 (Pedophilic Type), Sexually Attracted to Children Age 11–14 (Hebephilic Type), or Sexually Attracted to Both (Pedohebephilic Type). We further recommend that the *DSM-V* encourage users to record the typical age of children who most attract the patient sexually as well as the gender of children who most attract the patient sexually.

Keywords *DSM-V* · Ephebophilia · Hebephilia · Paraphilia · Pedophilia · Penile plethysmography · Phallometry · Sexual offending · Sexual orientation · Teleiophilia

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Introduction

The *DSM-IV-TR* (American Psychiatric Association, 2000) defines *pedophilia* as the erotic preference for prepubescent children. A substantial body of evidence indicates that this definition, if taken literally, would exclude from diagnosis a sizable proportion of those men whose strongest sexual feelings are for physically immature persons. Before we present this evidence, we will first consider the classification of children as pubescent or prepubescent.

The average age of menarche for American Caucasian females is 12.9 years (Herman-Giddens et al., 1997). There are various other indicators of pubertal onset, however, which usually appear before menarche. In females, the first stage of pubic hair development (sparse growth along the

labia) appears at an average age of 11.0 years, and the first stage of breast development (breast buds) at 11.2 years (Roche, Wellens, Attie, & Siervogel, 1995). In males, the first stage of pubic hair development (sparse growth at the base of the penis) appears at 11.2 years, and the first pubertal changes to the penis and testes (e.g., changes in texture and coloration of the scrotal skin) also at 11.2 years (Roche et al., 1995). In females, adult-pattern pubic hair (inverse triangle spreading to the thighs) appears at 13.1–15.2 years, according to different studies, and adult-type breasts (projection of the papillae only, after recession of the areolae) develop at 14.0–15.6 years (Grumbach & Styne, 1998, Table 31-2). In males, adult-pattern pubic hair (inverse triangle spreading to the thighs) appears at 14.3–16.1 years, and the genitalia attain adult size and shape at 14.3–16.3 years (Grumbach & Styne, 1998, Table 31-4). The pubertal growth spurt in height begins around age 10 in females and age 12 in males; it ends around age 15 in females and age 17 in males (Grumbach & Styne, 1998, Fig. 31-11). In summary, pubescent children are generally those from age 11 or 12 years to about 14 or 15; prepubescent children are those who are younger.

The modal age of victims of sexual offenses in the United States is 14 years (Snyder, 2000, Fig. 1; Vuocolo, 1969, p. 77), therefore the modal age of victims falls within the time-frame of puberty. In anonymous surveys of social organizations of persons who acknowledge having an erotic interest in children, attraction to children of pubescent ages is more frequently reported than is attraction to those of prepubescent ages (e.g., Bernard, 1975; Wilson & Cox, 1983). In samples of sexual offenders recruited from clinics and correctional facilities, men whose offense histories or assessment results suggest erotic interest in pubescents sometimes outnumber those whose data suggest erotic interest in prepubescent children (e.g., Cantor et al., 2004; Gebhard, Gagnon, Pomeroy, & Christenson, 1965; Studer, Aylwin, Clelland, Reddon, & Frenzel, 2002). The foregoing findings are consistent with the results of large-scale surveys that sampled individuals from the general population and included questions regarding sexual experiences with older persons when the respondent was underage. These results suggest that a substantial proportion of respondents who had had such experiences reported ages at occurrence that fall within the normal time-frame of puberty (Boney-McCoy & Finkelhor, 1995; Briere & Elliott, 2003; Finkelhor, Ormrod, Turner, & Hamby, 2005). The precise proportion, however, cannot be calculated from the published data.

The existence of men whose erotic interest centers on pubescents has not, of course, been totally ignored. Glueck (1955) coined the term *hebephiles* to refer to them. This term has not come into widespread use, even among professionals who work with sex offenders. One can only speculate why not. It may have been confused with the term *ephebophiles*, which denotes men who prefer adolescents around 15–

19 years of age (Krafft-Ebing & Moll, 1924). Few would want to label erotic interest in late- or even mid-adolescents as a psychopathology, so the term hebephilia may have been ignored along with ephebophilia.

A second possible reason why the term hebephilia has not become more common has to do with female reproductive physiology. The temporally discrete and developmentally unique event of menarche seems to divide females naturally into two classes; thus, the obvious distinction among men is between those who prefer females before their first menses and those who prefer females who have passed this milestone. Such a division is consistent with various cultural and religious attitudes towards menarche. It would also appear consistent with an evolutionary psychology position that the adaptive partner-preference is for fecund females (although females are actually subfecund for 1–2 years after menarche; Wood, 1994, p. 407). In any event, this distinction may have more to do with the ideological meaning of menarche for the labelers than with the erotic preferences of the man being labeled. From the man's point of view, the sexual attractiveness of a girl one year after menarche (e.g., age 14) may equal that of a girl one year before menarche (e.g., 12), not that of a girl five years after menarche (e.g., 18).

A third possible reason for the disuse of hebephilia is a general resistance or indifference to the adoption of a technical vocabulary for erotic age-preferences. There may be as many mental health professionals who have heard of “granny porn” as have heard of *gerontophilia* (the erotic preference for the aged), although the term gerontophilia was introduced at least 80 years ago (Hirschfeld, 1920). It is only a few years since anyone finally proposed a term—*teleiophilia*—to denote the erotic preference for persons between the ages of physical maturity and physical decline (Blanchard et al., 2000), even though the word *normal* has been effectively off-limits for describing erotic interests for decades.

Several studies have demonstrated the utility of specifying a hebephilic group, at least for research purposes. These studies have compared pedophilic, hebephilic, and teleiophilic men on a variety of dependent measures. The results have shown hebephiles to be intermediate between pedophiles and teleiophiles with regard to IQ (Blanchard et al., 2007; Cantor et al., 2004), completed education (Blanchard et al., 2007), school grade failure and special education placement (Cantor et al., 2006), head injuries before age 13 (Blanchard et al., 2003), left-handedness (Blanchard et al., 2007; Cantor et al., 2005), and stature (Cantor et al., 2007).

The finding that the groups designated “hebephiles” were intermediate in IQ, handedness, and so on, is consistent with the notion that they were also intermediate in their erotic preference, but it does not prove it. The designated hebephilic groups might simply have been a mixture of pedophiles and teleiophiles; in that case, one would also expect to observe

intermediate values on all these dependent measures. What is needed to establish hebephilia as a legitimate diagnostic entity is convergence between two or more lines of evidence bearing directly on a man's sexual interest in children, pubescents, and adults.

The present study sought to validate the concept of hebephilia by examining the agreement between self-reported and psychophysiological assessed erotic responses. Psychophysiological assessment consisted of phallometric testing, an objective technique for quantifying erotic interests in human males. In phallometric tests for gender and age preference, the individual's penile blood volume is monitored while he is presented with a standardized set of laboratory stimuli depicting male and female children, pubescents, and adults. Increases in the examinee's penile blood volume (i.e., degrees of penile erection) are taken as an index of his relative attraction to different classes of persons.

Our specific research questions were straightforward: Do men who report maximum sexual attraction to pubescent children have greater penile responses, in the laboratory, to depictions of pubescent children than to depictions of younger or older persons? Can such men be distinguished from those who report maximum attraction to prepubescent children, on the one hand, and from those who report maximum attraction to fully grown persons, on the other? Positive answers to these questions would argue for the recognition of hebephilia as a clinically and perhaps theoretically significant erotic preference. They would also imply that the current *DSM* definition of pedophilia is excluding from specific diagnosis a considerable proportion of men who have a persistent preference for humans at an incomplete stage of physical development. In contrast, negative answers would suggest that the hebephilic groups studied in previous investigations have merely been mixtures of pedophiles and teleiophiles, and that this explains why the hebephiles' results (for IQ, handedness, and so on) were intermediate between those of homogeneously classified pedophiles and teleiophiles. Negative results would moreover indicate that the *DSM* diagnosis of Paraphilia Not Otherwise Specified is probably adequate for the diagnosis of many men who do not quite satisfy the *DSM* criteria for Pedophilia.

The research design sketched above is simple in principle but challenging in practice. The great majority of men with an erotic preference for children deny this to mental health professionals and researchers, as they do to police, lawyers, and judges. Perhaps 40% of "nonadmitting" pedophiles (and hebephiles) are able to manipulate their phallometric test outcomes sufficiently to avoid a diagnosis of pedophilia (e.g., Blanchard, Klassen, Dickey, Kuban, & Blak, 2001). It is likely that many nonadmitters who fail to avoid a diagnosis of pedo- or hebephilia nonetheless distort their phallometric data somewhat in the attempt. Thus, nonadmitting pedophiles (and hebephiles) are not useful for theoretical studies like the present one, which depend on high-quality phallometric data from cooperative

participants. The present study was possible because the very large volume of assessments carried out at the authors' clinic enabled us to collect, over an 11-year period, a sufficient number of men who acknowledged an erotic preference for persons at some level of physical immaturity.

Method

Participants

Between August 1995 and April 2006, 2,868 male patients were referred to the Kurt Freund Laboratory of the Centre for Addiction and Mental Health (Toronto, Ontario, Canada) because of paraphilic, criminal, or otherwise problematic sexual behavior. The purpose of these referrals was to determine what kinds of sexual partners (or sexual victims) and what kinds of sexual activities were most arousing to these individuals. The assessment usually included testing for erotic age-preference (pedophilia, hebephilia, teleiophilia), even when the presenting problem did not involve offenses against children. That is because paraphilias tend to cluster, and because men who present with no known sexual offenses or offenses solely against adults sometimes prove to have an erotic preference for the immature phenotype. The identical phallometric test for erotic age-preference was administered to 2,591 of these men; this test also assessed their erotic gender-preference (Blanchard et al., 2001).

Excluded from eligibility for the study were 191 men whose phallometric test results were spoiled by technical problems or whose responses were too low (see later), 58 men whose sexual history information was incomplete or had not yet been computerized at the time of the data retrieval, and 38 men who did not give consent for their clinical assessment data to be used for research purposes. The initial pool of potential patient participants therefore included 2,304 men, with a mean age of 37.75 years ($SD = 13.24$ years), and a median education level of Grade 12.

The sources of the referrals included parole and probation officers, prisons, defense lawyers, various institutions (ranging from group homes for mentally retarded persons to regulatory bodies for health or educational professionals), and physicians in private practice. As would be expected from the preponderance of criminal justice sources, the majority of patients had one or more sexual offenses. The phrase *sexual offenses*, in this article, includes charges, convictions, credible accusations, and self-disclosures of criminal sexual behavior. *Credible accusations* were defined by default, that is, all accusations excepting those that were made by an individual who stood to gain in some way from criminal charges against the accused, that had no corroborating evidence, and that were not voiced at the time the alleged offense or offenses occurred. Only a small proportion of accusations were not considered

credible; typical examples were allegations, not followed by criminal charges, from estranged spouses in child custody-and-access disputes.

The patient pool comprised approximately 10% men with no known sexual offenses; 10% with offenses involving the possession, distribution, or manufacture of child pornography; 18% with offenses against children age 5 or younger; 39% with offenses against children age 6–10; 12% with offenses against children age 11; 32% with offenses against pubescents age 12–14; 15% with offenses against teenagers age 15–16; and 27% with offenses against adults age 17 or older. These percentages add up to more than 100%, because many patients had offenses in more than one category. Offenses against adult victims included some that involved physical contact (e.g., rape, frotteurism) and others that did not (e.g., exhibitionism, voyeurism, obscene telephone calling). Men who had no involvement with the criminal justice system and who initiated referrals through their physicians included patients who were unsure about their sexual orientation, patients concerned about hypersexuality or “sex addiction,” patients experiencing difficulties because of their excessive use of telephone sex lines or massage parlors, clinically obsessional patients with intrusive thoughts about unacceptable sexual behavior, and patients with paraphilic behaviors like masochism, fetishism, and transvestism.

Added to the initial pool of 2,304 patients were 51 men with criminal offenses of a nonsexual nature, who were not patients but paid research volunteers (Cantor et al., 2008). They were included because they had all the same data as the patients; because there was no reason to exclude them, given the goals of the study; and because some of them reported pedophilia or homosexuality, although they had not been recruited on that basis. Thus, the total number of potential participants was 2,355.

Materials and Measures

Sexual History

A standardized form, which has been employed in the Kurt Freund Laboratory since 1995, was used to record the patient’s history of sexual offenses. Most of that information came from objective documents that accompanied his referral, for example, reports from probation and parole officers. The offense-history data were cross-checked against, and supplemented by, information provided by the patient himself. This included the number and nature of any additional sexual offenses that were admitted by the patient but for which he was never charged. The patient’s information was solicited by the laboratory manager in a structured interview, which was conducted, in the great majority of instances, immediately before phallometric testing.

The patient’s sexual history was quantified and recorded using a large number of predetermined categories, some pertaining to the gender and ages of his sexual victims (if any) and others pertaining to the nature of his criminal or other sexual activities (e.g., indecent exposure, rape, consenting intercourse). Of present relevance were the patient’s numbers of female victims in six age-ranges—5 and younger, 6–10, 11, 12–14, 15–16, and 17 or older—and his numbers of male victims in the same six age-ranges. The numbers of female and male victims 11 years of age were recorded as separate variables because it was unclear at the time that the structured interview and its companion database were designed whether children of this age should be classed with younger children as prepubescent or with older children as pubescent. Also recorded as separate variables were the patient’s criminal charges and self-admissions regarding the use, manufacture, or distribution of child pornography.

Self-Report of Erotic Preferences

The interviewer recorded the patient’s self-reported sexual interest in other persons, using 12 separate variables: the patient’s degree of sexual interest in females age 5 or younger, 6–10, 11, 12–14, 15–16, and 17 or older, and in males in the same six age-ranges. In some cases, this required a great deal of exploration: “Are you more attracted to adults or to children?” “Are you more attracted to boys or to girls?” “Are you more attracted to girls before they commence puberty or after they have entered puberty?” “Do you find 11-year-old girls more attractive than 14-year-old girls, less attractive, or equally attractive?” “Do you feel any interest at all in 11-year-old boys?” In many instances, however, the process was relatively brief and straightforward, because the patient stated that his primary sexual interest was in females age 17 or older, sometimes with a lesser degree of attraction to females age 15–16, and that he had no attraction to females under the age of 15 or to males of any age.

The interviewer quantified the patient’s self-reported sexual interest in each of the 12 gender-age categories, using a rating from 1 to 5. A rating of 5 indicated that persons of a given gender and age (e.g., males age 15–16 years) stimulated as much sexual interest as the participant was capable of feeling (toward another person). A rating of 1 indicated that the participant felt no sexual attraction for persons of that age and gender. If the patient was willing and able to discriminate multiple levels of sexual attraction, ratings of 2, 3, and 4 were used to record middling levels of erotic interest. Any given rating-number could be used for more than one gender-age category. A patient who reported an erotic preference for pubescent males, for example, might get ratings of 5 for 11-year-old boys and for 12–14 year-old boys and ratings of 4 for 6–10 year-old boys and for 15–16 year-old boys. This complicated method of assessing

erotic age-preference was used because its original purpose in the structured interview was not to pinpoint the age or physical maturation of persons for whom the participant reported the strongest attraction, but rather to assess whether—or to what extent—he admitted an erotic interest in persons of the same chronological age and gender as his known sexual victims.

Phallometric Apparatus

All participants in this study underwent the standard testing procedures of the Kurt Freund Laboratory. The Laboratory is equipped for volumetric plethysmography, that is, the apparatus measures penile blood volume change rather than penile circumference change. The volumetric method measures penile tumescence more accurately at low levels of response (Kuban, Barbaree, & Blanchard, 1999). A photograph and schematic drawing of the volumetric apparatus are given in Freund, Sedlacek, and Knob (1965). The major components include a glass cylinder that fits over the penis and an inflatable cuff that surrounds the base of the penis and isolates the air inside the cylinder from the outside atmosphere. A rubber tube attached to the cylinder leads to a pressure transducer, which converts air pressure changes into voltage output changes. Increases in penile volume compress the air inside the cylinder and thus produce an output signal from the transducer. The apparatus is calibrated so that known quantities of volume displacement in the cylinder correspond to known changes in transducer voltage output. The apparatus is very sensitive and can reliably detect changes in penile blood volume below the threshold of subjective awareness.

Phallometric Procedure

The participant placed the glass cylinder over his penis, according to instructions from the test administrator. He then sat in a reclining chair, which faced three adjacent projection screens, and put on a set of headphones. After the set-up was complete, the participant's lower body was covered with a sheet to minimize his embarrassment or discomfort. During the test, the participant's face was monitored with a low-light video camera, in order to monitor stimulus avoidance strategies such as closing the eyes or averting them from the test stimuli.

The phallometric test used in this study has been described in detail elsewhere (Blanchard et al., 2001, 2007). The stimuli were audiotaped narratives presented through the headphones and accompanied by slides shown on the projection screens. There were seven categories of narratives, which described sexual interactions with prepubescent girls, pubescent girls, adult women, prepubescent boys, pubescent boys, and adult men, and also solitary, nonsexual activities ("neutral" stimuli). All narratives were written in the second person and present

tense and were approximately 100 words long. The scripts of sample narratives have been reproduced in previous articles (Blanchard et al., 2001, 2007). The narratives describing heterosexual interactions were recorded with a woman's voice, and those describing homosexual interactions, with a man's. Neutral stimuli were recorded with both.

Each test trial consisted of one narrative, accompanied by photographic slides on the three adjacent screens, which simultaneously showed the front view, rear view, and genital region of a nude model who corresponded in age and gender to the topic of the narrative. In other words, a narrative describing sex with an adult man would be accompanied by multiple images of nude adult men. A photograph that illustrates how the models were posed for the full frontal view may be found in Blanchard et al. (2007). The neutral narratives (e.g., "You climb down into the small rowboat, untie it, and push off from the dock with an oar...") were accompanied by slides of landscapes.

Each trial included three different models, each presented for 18 s. Therefore the total duration of a trial was 54 s, during which the participant viewed a total of nine slides, three at a time. For example, in a stimulus trial depicting physically mature females, the participant would hear one narrative describing sex with an adult woman, while he viewed photographs of woman A from three angles, followed by woman B from three angles, followed by woman C from three angles.

The full test consisted of four blocks of seven trials, with each block including one trial of each type in fixed, pseudorandom order. Although the length of the trials was fixed, the interval between trials varied, because penile blood volume was required to return to its baseline (flaccid) value before a new trial was started. The time required to complete a test was usually about 1 h.

Phallometric Stimuli

The narratives depicting sexual interaction with prepubescent children and pubescent children explicitly stated the age of the fictional child at the beginning of the script, for example, "You are babysitting a five-year-old girl for the evening. She is taking a bath before she gets ready for bed. Through the open bathroom door, she calls you to come in and scrub her back..." In the narratives about prepubescent children, the ages of the fictional children were variously stated as 5–9 years. In the narratives about pubescent children, the ages were given as 11–13 years. The narratives describing interaction with adult men and women did not state the age of the fictional sexual partner, although they were clearly portrayed as adults. There was no relation between the various activities described in the narratives and the uniform, static poses of the simultaneously presented models.

The original set of photographic models on which the present test was based comprised prepubescent girls age 5–

11, pubescent girls 12–14, adult women 22–26, prepubescent boys 5–11, pubescent boys 12–14, and adult men 19–25 (Freund, Langevin, Cibiri, & Zajac, 1973; Freund, McKnight, Langevin, & Cibiri, 1972). There have been some additions or substitutions of models in the intervening years, primarily involving the adults. The new models extended the ages of the prepubescent girls to 3–11 years, the ages of the adult women to 20–35 years, and the ages of the adult men to 19–41 years.

Because of the central importance of the pubescent stimuli in this study, the physical maturity of the photographic models was rated by one of the authors (D.W.), a pediatric endocrinologist, and the results are presented below. The rating system used the stages of sexual development originally identified by Tanner (1978). Tanner stages pertain to breast development and pubic hair growth in females, and to genital development and pubic hair growth in males. Tanner stages are rated from 1 (prepubertal) to 5 (fully mature), according to established criteria. Breast development and pubic hair growth are not always perfectly correlated in females, and genital development and pubic hair growth are not always perfectly correlated in males; therefore Tanner stages are rated separately for each feature.

According to Marshall and Tanner (1969), the criteria for female breast development are as follows: stage 1—prepubescent, projection of the papilla only; stage 2—breast bud stage, elevation of breast, papilla as a small mound, enlargement of areolar diameter; stage 3—further enlargement of breast and areola with no separation of their contours; stage 4—projection of areola and papilla to form a secondary mound above the level of the breast; and stage 5—mature stage, projection of papilla only, areola recessed to the general contour of the breast. The genital development stages for males (Marshall & Tanner, 1970) are as follows: stage 1—prepubescent, genitals are about the same size and proportion as in early childhood; stage 2—scrotum and testes have enlarged, scrotal skin shows a change in color and texture; stage 3—growth of the penis in length and girth, further growth of testes and scrotum; stage 4—penis is further enlarged, development of the glans; and stage 5—genitalia are adult in size and shape. With regard to both female and male pubic hair growth, the Tanner stages are as follows: stage 1—prepubescent, no pubic hair; stage 2—sparse growth of long, slightly pigmented downy hair, appearing mainly along the labia or base of the penis; stage 3—hair is darker and coarser, spreads over the junction of the pubes; stage 4—hair is adult in type, but area covered still significantly less than in a mature adult; and stage 5—hair is adult in type and quantity and distributed in an inverse triangle.

With only a few exceptions (one boy used as a prepubescent stimulus had Tanner stage 2 genitals and another had Tanner stage 2 pubic hair), all the prepubescent children were rated as Tanner stage 1's, and all the adults were rated as

Tanner stage 5's, for all body regions. The mean Tanner stage for the breasts of the pubescent girls was 2.67 (SD = 1.03, range, 2–4), and the mean Tanner stage for their pubic hair growth was 2.33 (SD = 0.82, range, 1–3). The corresponding Tanner stages for the pubescent boys were as follows: genital development, mean of 3.83 (SD = 0.75, range, 3–5), and pubic hair growth, mean of 3.33 (SD = 0.82, range, 2–4). Another of the co-authors (A.D.L.), who trained herself on Tanner ratings for this subproject, also rated the Tanner stages for the pubescent females and males; inter-rater reliability was $r = .87$ for female breast development, $r = .93$ for female pubic hair growth, $r = .87$ for male genital development, and $r = .83$ for male pubic hair growth (all were significant at $p < .05$).

Phallometric Response Processing

Penile blood volume change was sampled four times per second. The participant's response was quantified in two ways: as the extremum of the curve of blood volume change (i.e., the greatest departure from initial value occurring during the 54 s of the trial) and as the area under the curve. To identify participants whose penile blood volume changes during the test trials remained within the range typical of random blood volume fluctuations in nonaroused men, the mean of the three highest positive extremum scores—a quantity called the *Output Index* (Freund, 1967)—was calculated. The phallometric data of participants who failed to meet the criterion output index of 1.0 cc were excluded. As measured by the Laboratory's equipment, full erection for the average man corresponds to a blood volume increase of 20–30 cc.

Each participant's 28 extremum scores were then converted into standard scores, based only on his own extremum data, and the same operation was carried out on his area scores. Next, for each participant, the standardized extremum and area scores were combined to yield a separate composite score for each of the 28 trials, using the formula: $(Z_i^E + Z_i^A)/2$, where Z_i^E is the standardized extremum score for the i th trial, and Z_i^A is the standardized area score for the i th trial. These operations were carried out for the following reasons: (a) In phallometric work, some transformation of raw scores is generally required in combining data from different participants, because the interindividual variability in absolute magnitude of blood volume changes can otherwise obscure even quite reliable statistical effects. There are numerous sources of such variability, for example, the participant's age, his state of health, the size of his penis, and the amount of time since his last ejaculation from masturbation or interpersonal sexual activity. Empirical research has shown the Z-score transformation to be optimal (Earls, Quinsey, & Castonguay, 1987; Harris, Rice, Quinsey, Chaplin, & Earls, 1992; Langevin, 1985). (b) The (highly correlated) area and extremum Z-scores were averaged to obtain a composite that reflected both the speed and

amplitude of response and lessened the impact of anomalous responses, that is, large change from initial value but small area or vice versa (Freund, Scher, & Hucker, 1983).

In the last stage of basic processing, the data were reduced to seven final scores for each participant by averaging his four composite scores in each of the seven stimulus categories. These seven *category scores* were taken as measures of the participant's relative erotic interest in adult women, pubescent girls, prepubescent girls, and so on.

Results

The first task of data analysis was assigning participants to discrete groups according to the ages of their most desired partners. No single item in our recorded data contained the participant's response to the simple question, "What is the typical age of persons who most attract you sexually?" It was, furthermore, impossible simply to classify participants according to the gender-age category to which they gave the maximum attractiveness rating, because participants could—and sometimes did—report the maximum rating for more than one category. We therefore attempted to classify participants into non-overlapping age-preference groups according to some parameter of their overall attractiveness ratings profile. We investigated two different parameters for this purpose. The first parameter was the oldest age category whose attractiveness rating was greater than or equal to the mean rating of all younger categories. The second parameter was the youngest age category whose attractiveness rating was greater than or equal to the mean rating of all older categories. Use of the second parameter resulted in a better distribution of cases across the younger age-preference groups, and it was chosen on that basis. The complete algorithm for converting our attractiveness ratings into age-preference groups worked as follows.

If the mean of the participant's attractiveness ratings for all six categories of females (ages 5 and younger, 6–10, 11, 12–14, 15–16, and 17 or older) was greater than his mean for all six categories of males, then the participant was designated as heterosexual. If the mean of his attractiveness ratings for all categories of males was greater than his mean for all categories of females, then he was designated as homosexual. The 34 participants with exactly equal means (i.e., bisexuals) were excluded from further processing.

Heterosexual participants were then classified into six age-preference groups according to the following series of tests performed in the following order.

1. If the participant's attractiveness rating for females age 0–5 was greater than or equal to his mean attractiveness rating for the five older age categories, then he was classified as a *Pedophile 1*.
2. If the participant's rating for females age 6–10 was greater than or equal to his mean rating for the four older age categories, then he was classified as a *Pedophile 2*.
3. If the participant's rating for females age 11 was greater than or equal to his mean rating for the three older age categories, then he was classified as a *Hebephile 1*.
4. If the participant's rating for females age 12–14 was greater than or equal to his mean rating for the two older age categories, then he was classified as a *Hebephile 2*.
5. If the participant's rating for females age 15–16 was greater than or equal to his rating for females age 17 or older, then he was classified as an *Ephebophile*.
6. If the participant, having passed through all the foregoing tests, had no known sexual offenses against persons under the age of 15 and no child pornography offenses, then he was classified as a *Teleiophile*.

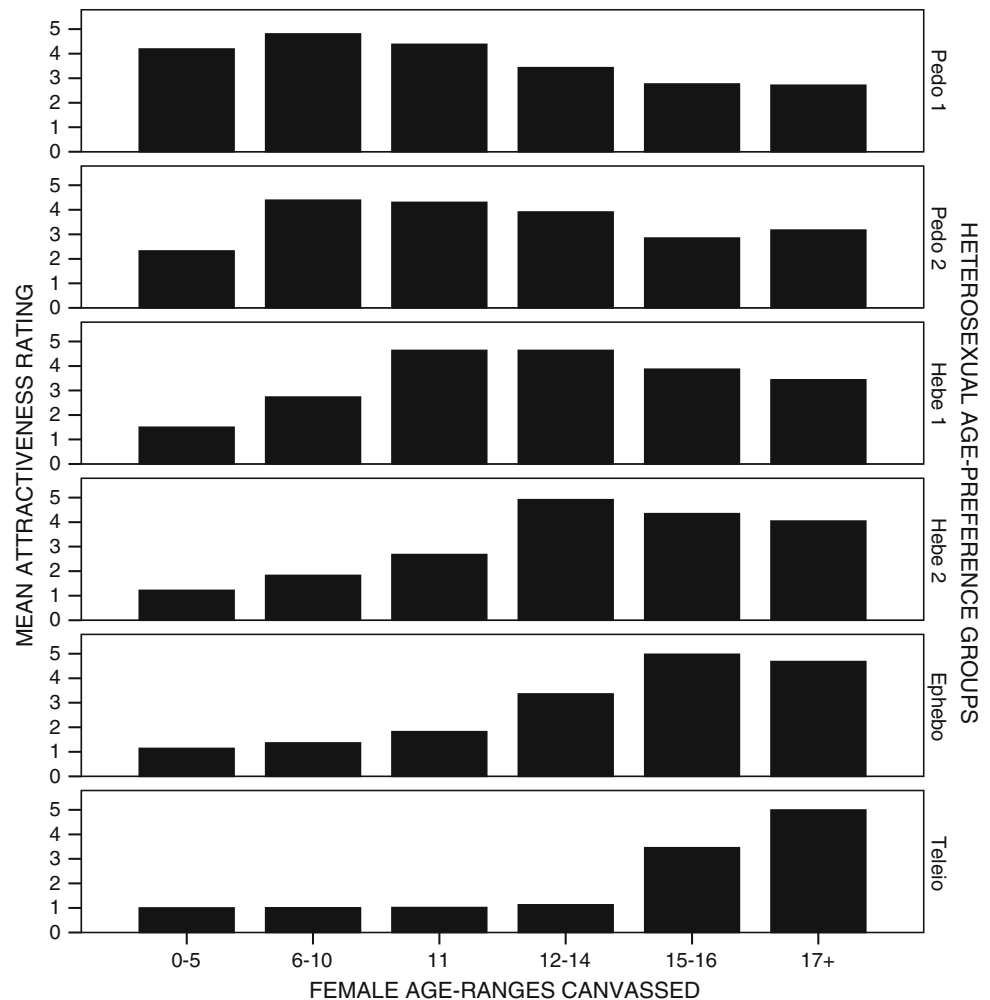
Homosexual participants went through a parallel series of tests, based on their attractiveness ratings for the six age-categories of males and on their known sexual offenses, and they were assigned to the corresponding six age-preference groups.

Figures 1 and 2 show the empirical relations between the computed age-preference groups and the attractiveness ratings on which they were based. Figure 1 shows the data for the heterosexual groups, and Fig. 2, for the homosexual groups. These data demonstrate that the classification algorithm worked as we had hoped and provide the empirical justification for the group-labels, *Pedophile 1*, *Pedophile 2*, and so on.

Most of the individual participants had attractiveness ratings profiles that resembled the mean profile of the age-preference group to which they had been assigned. Thus, for example, 90% of heterosexual *Hebephile 1* group gave the maximum attractiveness rating of "5" to females age 11 or 12–14 (or both), and 93% of the heterosexual *Hebephile 2* group gave the maximum attractiveness rating to females age 12–14 or 15–16 (or both). In the homosexual *Hebephile 1* group, 80% gave the maximum attractiveness rating to males age 11 or 12–14; in the homosexual *Hebephile 2* group, 100% gave the maximum attractiveness rating to males age 12–14 or 15–16. Because the ratings profiles were necessarily related to the age-preference groups via the computational algorithm, we did not perform any statistical comparisons of them.

The offenders against persons under age 15 and child pornography offenders were excluded from the *teleiophilic* groups (algorithm step #6) because men who claim a preference for adults but have committed offenses against children are often truly pedophilic or hebephilic (e.g., Blanchard et al., 2001, 2006; Freund & Blanchard, 1989; Seto, Cantor, & Blanchard, 2006). Thus, these participants were excluded on the grounds that their phallometric responses would be relatively likely to reflect deliberate attempts to manipulate the test outcome. The data of many of these excluded "nonadmitters" have been

Fig. 1 Attractiveness ratings for females of various ages, for the heterosexual age-preference groups. The age-preference abbreviations are interpreted as follows: Pedo, pedophile; Hebe, hebephile; Ephebo, ephebophile; Teleio, teleiophile. The anchor-points for the attractiveness ratings are as follows: 1, females of the canvassed age stimulate no sexual interest; 5, females of that age stimulate as much sexual interest as the participant is capable of feeling



analyzed in previous studies (Blanchard et al., 2001, 2006). The offense-history criterion excluded 1,387 participants from the heterosexual teleiophilic group and 53 from the homosexual teleiophilic group.

The number of participants in each age-preference group and their mean ages at testing are presented in Table 1. One-way analyses of variance revealed no significant differences in age among the heterosexual groups, $F(5, 739) = 2.15$, *n.s.*, or among the homosexual groups, $F(5, 130) < 1$.

Table 1 also shows the median ages of the victims of the participants' sexual offenses. The median victim age was determined, for each group, by summing their total number of victims in all age-ranges and then determining the age-range in which the median fell. Thus, for example, the heterosexual Pedophile 1 group had 109 (female) victims: 16 victims age 5 or younger, 52 victims age 6–10, 12 victims age 11, 12 victims age 12–14, 11 victims age 15–16, and 6 victims age 17 or older. The median age is the age of the 55th oldest victim, and the 55th oldest victim fell in the 6–10 age-range.

There was one restriction on computing the median victim age. In order to prevent the few participants with very large numbers of victims (usually exhibitionists) from dis-

torting the results, the participant's number of victims in any given gender-age category was artificially capped at 10.

Within-Groups Comparisons

The dependent measures of primary interest in this study were the participants' penile responses in the laboratory to stimulus depictions of prepubescent children, pubescent children, and adults. Figure 3 shows, for each heterosexual age-preference group, that group's mean penile response to prepubescent girls, its mean response to pubescent girls, and its mean response to adult women. Thus, for example, the topmost panel of Fig. 3 shows that the heterosexual Pedophile 1 group responded most to prepubescent girls, less to pubescent girls, and least to adult women. The next panel down shows that the heterosexual Pedophile 2 group responded slightly more to pubescent than to prepubescent girls but still least to adult women. Figure 4 shows the analogous data for the homosexual age-preference groups.

Our phallometric test did not include stimuli depicting persons in mid-adolescence or late adolescence. Thus, there

Fig. 2 Attractiveness ratings for males of various ages, for the homosexual age-preference groups. The age-preference abbreviations are interpreted as follows: Pedo, pedophile; Hebe, hebephile; Ephebo, ephhebophile; Teleio, teleiophile. The anchor-points for the attractiveness ratings are as follows: 1, males of the canvassed age stimulate no sexual interest; 5, males of that age stimulate as much sexual interest as the participant is capable of feeling

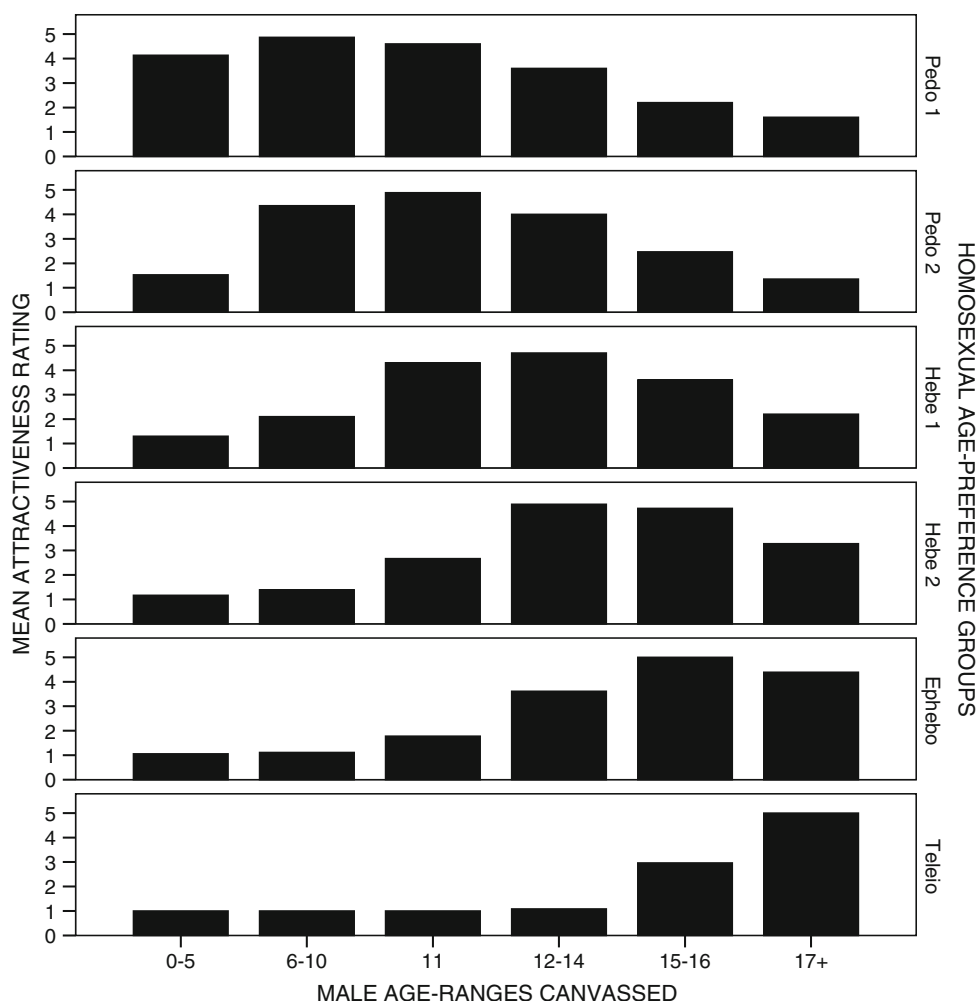


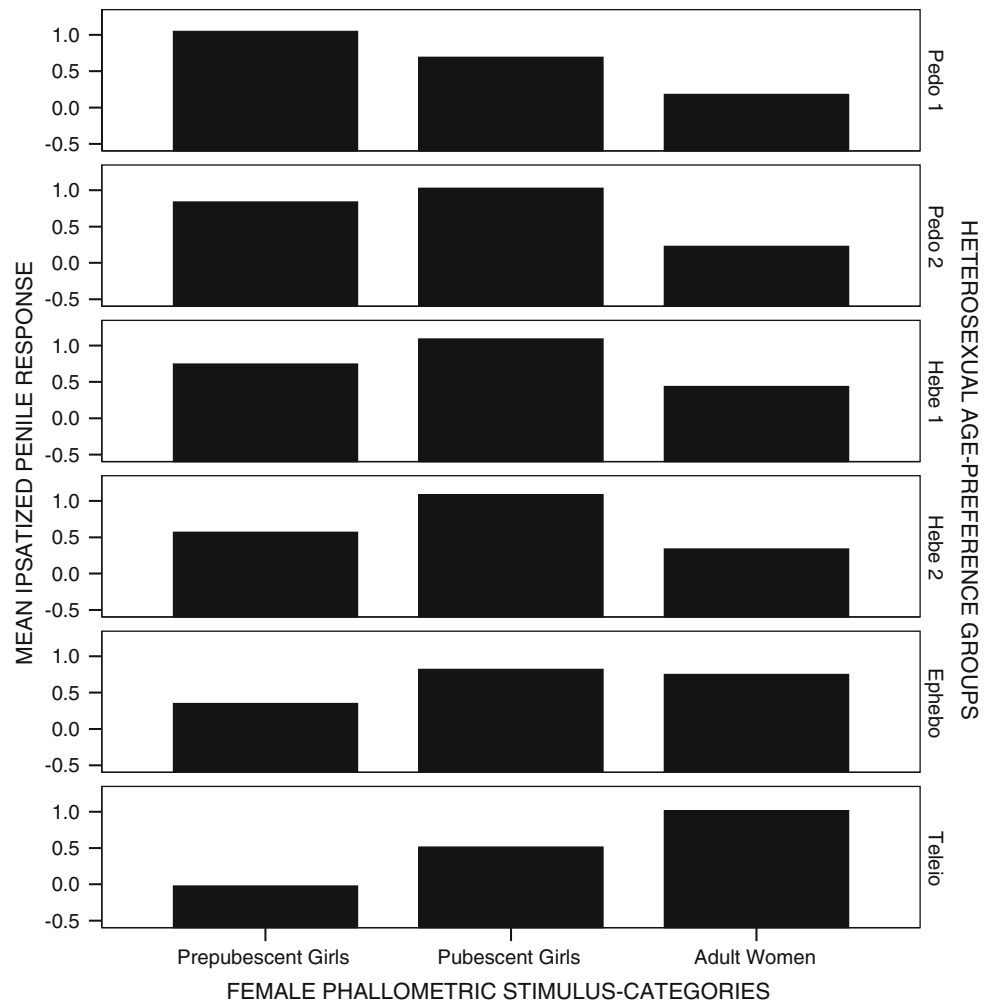
Table 1 Group size, mean age at testing, and median ages of the victims of the participants' sexual offenses

Gender-preference	Age-preference					
	Pedo 1	Pedo 2	Hebe 1	Hebe 2	Ephebo	Teleio
Heterosexual						
Group size	21	46	30	46	50	552
Age	33.14 (13.02)	30.48 (10.52)	35.30 (12.27)	34.96 (13.67)	33.68 (13.78)	35.85 (11.30)
Median victim age	6–10	11	12–14	12–14	12–14	≥17
Homosexual						
Group size	15	17	10	18	18	58
Age	36.00 (12.94)	40.41 (15.24)	40.30 (10.56)	39.00 (15.80)	35.39 (11.85)	39.12 (11.50)
Median victim age	6–10	11	12–14	12–14	15–16	≥17

was no optimal stimulus-category for the self-reported ephhebophiles to respond to. One might therefore expect that the ephhebophiles would respond about equally to pubescents and adults. These are the two age-categories adjacent to adolescence; the missing peak phallometric response between responses to pubescents and responses to adults would correspond to the missing adolescent stimuli. The data did, in fact,

show precisely this pattern for the heterosexual ephhebophiles (Fig. 3) but not for the homosexual ephhebophiles (Fig. 4). The phallometric profile of the homosexual ephhebophiles corresponded to the expected pattern for hebephiles, not to our hypothesized pattern for ephhebophiles. In fact, the phallometric profiles of the homosexual participants seemed generally to be shifted one category compared with the hetero-

Fig. 3 Mean penile response of the six heterosexual age-preference groups to laboratory stimuli depicting prepubescent, pubescent, and physically mature females. The means for the prepubescent, pubescent, and physically mature males are not shown



sexual participants. Thus, the profile of the homosexual Ephebophile group resembled that of the heterosexual Hehebophile 2 group; the homosexual Hehebophile 2 group resembled the heterosexual Hehebophile 1 group; the homosexual Hehebophile 1 group resembled the heterosexual Pedophile 2 group; and both homosexual pedophilic groups were shifted toward response to younger persons compared with the heterosexual Pedophile 1 group. It is unclear whether this result reflects a fact of nature, some specific properties of our phallometric stimuli, some specific properties of our sample, or simply the much smaller size of the homosexual group. In any event, the phallometric profiles of the homosexual and heterosexual teleiophiles were very similar, so the results did not reveal a uniform tendency for homosexual participants to respond in the laboratory to younger persons than they indicate in interview.

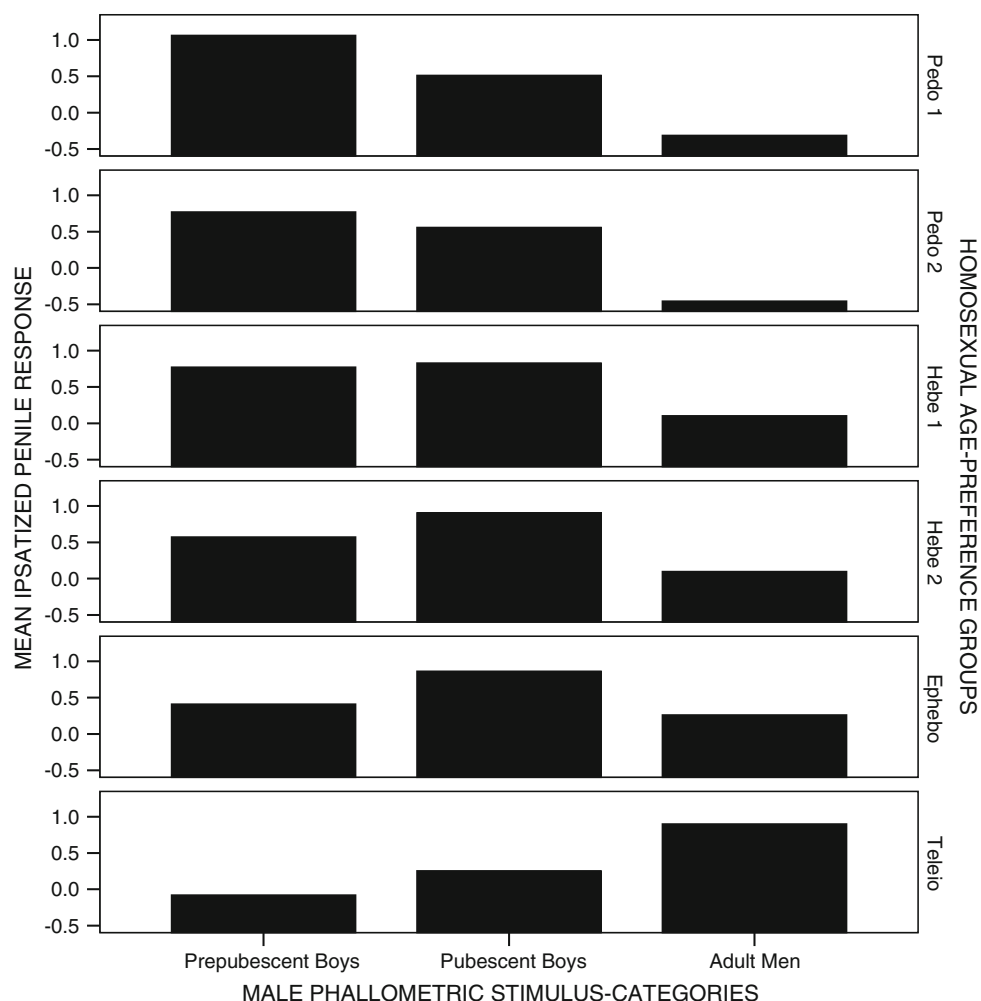
Statistical analyses were conducted on the data shown in Figs. 3 and 4 to ascertain whether the pedophiles responded significantly more to prepubescent children than they did to older persons, whether the teleiophiles responded significantly more to adults than to younger persons and—most

critically—whether the hebephiles responded significantly more to pubescent children than they did to both older and younger persons. These analyses used paired *t*-tests. For each age-preference group, three such *t*-tests were performed: response to pubescent children vs. response to prepubescent children, response to pubescent children vs. response to adults, and response to prepubescent children vs. response to adults.

The results for the heterosexual participants are presented in Table 2. Although the reader can determine from the signs of the reported *t*-statistics which of two compared means had the higher value, the table is most readily interpreted in conjunction with Fig. 3. In what follows, we comment only on the key findings in Table 2.

The Pedophile 1 group did respond more to prepubescent girls than to pubescent girls, but the Pedophile 2 group responded more strongly to pubescent girls. Both hebephilic groups showed exactly the pattern we expected. They responded significantly more to pubescent girls than to prepubescent girls or to adult women. The Ephebophiles, as previously noted, responded about equally to pubescent girls and adult women. They responded least to prepubescent girls.

Fig. 4 Mean penile response of the six homosexual age-preference groups to laboratory stimuli depicting prepubescent, pubescent, and physically mature males. The means for the prepubescent, pubescent, and physically mature females are not shown



The Teleiophiles responded more to adult women than to pubescent girls, and more to pubescent girls than to prepubescent girls.

The findings for the homosexual participants are given in Table 3, which can be interpreted with the aid of Fig. 4. Both pedophilic groups responded more to prepubescent boys than to pubescent boys. Neither hebephilic group showed exactly the pattern we expected, in that neither group responded significantly more to pubescent boys than to prepubescent boys. This might have to do with small sample sizes and low statistical power, especially in the case of the Hebephile 2 group, which did show a trend in the expected direction. The Ephebophile group, as previously mentioned, showed the pattern we expected for the hebephilic groups. They responded significantly more to pubescent boys than to prepubescent boys or adult men. The results for the homosexual Teleiophiles resembled those of their heterosexual counterparts: They responded more to adult men than to pubescent boys, and more to pubescent boys than to prepubescent boys.

In order to ensure that the key findings above were not an artifact of our method for assigning cases to age-preference

groups, we confirmed these findings using a much simpler method. We selected all heterosexual participants who gave the maximum attractiveness rating of “5” to girls age 11 or to girls age 12–14 (or to girls in both age categories). We ignored the participants’ algorithmically computed age-preference group assignment, and we ignored their attractiveness ratings for all other age categories. This selection criterion identified 115 participants. We used paired *t*-tests to compare their penile responses to pubescent girls vs. prepubescent girls, and to pubescent girls vs. adult women. The participants responded significantly more to pubescent girls than to prepubescent girls, $t(114) = 5.26$, $p < .0001$, and they responded significantly more to pubescent girls than to adult women, $t(114) = 12.23$, $p < .0001$. We similarly selected 49 homosexual men who gave the maximum attractiveness rating of “5” to boys age 11 or 12–14. These men did not respond significantly more to pubescent boys than to prepubescent boys, $t(48) < 1$, but they did respond significantly more to pubescent boys than to adult men, $t(48) = 8.89$, $p < .0001$. In summary, the alternative method of identifying hebephilic men led to the same conclusions as the data presented in Tables 2 and 3.

Table 2 Ipsatized penile response: within-groups comparisons of means for heterosexual participants

Age-preference	df	Comparison					
		Pubescent girls vs. prepubescent girls		Pubescent girls vs. adult women		Prepubescent girls vs. adult women	
		<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>
Pedophile 1	20	−2.62	.02	4.38	.0003	5.48	<.0001
Pedophile 2	45	2.64	.01	7.10	<.0001	5.14	<.0001
Hebephile 1	29	4.94	<.0001	7.42	<.0001	2.66	.01
Hebephile 2	45	4.95	<.0001	7.00	<.0001	2.02	.05
Ephebophile	49	5.46	<.0001	0.53	n.s.	−2.82	.007
Teleiophile	551	23.63	<.0001	−14.16	<.0001	−30.02	<.0001

Note: All *p*-values are two-tailed. A negative *t*-value indicates that the mean specified first in the column heading was lower than the mean specified second

Table 3 Ipsatized penile response: within-groups comparisons of means for homosexual participants

Age-preference	df	Comparison					
		Pubescent boys vs. prepubescent boys		Pubescent boys vs. adult men		Prepubescent boys vs. adult men	
		<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>	<i>t</i>	<i>p</i>
Pedophile 1	14	−3.00	.01	6.69	<.0001	6.94	<.0001
Pedophile 2	16	−2.97	.01	5.53	<.0001	6.81	<.0001
Hebephile 1	9	0.32	n.s.	4.12	.003	5.21	.001
Hebephile 2	17	1.83	n.s.	4.52	.0003	2.03	n.s.
Ephebophile	17	3.18	.005	2.70	.02	0.90	n.s.
Teleiophile	57	4.12	.0001	−5.82	<.0001	−8.18	<.0001

Note: All *p*-values are two-tailed. A negative *t*-value indicates that the mean specified first in the column heading was lower than the mean specified second

Between-Groups Comparisons

Figures 3 and 4 were designed to emphasize the isometry between the phallometric data and the self-report data presented in Figs. 1 and 2, and also to highlight the phallometric response-profile that was characteristic of each age-preference group. These bar graphs do not, however, provide the clearest illustration of the relations between groups. The data in Figs. 3 and 4 were therefore redrawn as line graphs in Figs. 5 and 6 to illustrate these relations. The data for the heterosexual groups are shown in Fig. 5, and the data for the homosexual groups are shown in Fig. 6. The mean penile responses of the six age-preference groups to prepubescent children are connected by dotted lines, the mean responses to pubescent children are connected by dashed lines, and the mean responses to adults are connected by solid lines.

Figures 5 and 6 suggest three findings: (a) The pedophiles had greater responses to prepubescent children than the hebephiles or teleiophiles, (b) the teleiophiles had greater responses to adults than the hebephiles or pedophiles, and—most importantly—(c) the hebephiles had greater responses to pubescents than the pedophiles or teleiophiles. These impressions were tested in analyses of variance using the default

polynomial contrasts provided by SPSS-15 (SPSS, Inc., Chicago, IL). The linear contrasts were used to demonstrate the first two findings, and the quadratic contrasts were used to demonstrate the third finding. The linear contrast coefficients, for the six age-preference groups from Pedophile 1 to Teleiophile, were $-.598$, $-.359$, $-.120$, $.120$, $.359$, and $.598$, and the quadratic contrast coefficients were $.546$, $-.109$, $-.436$, $-.436$, $-.109$, and $.546$. The quadratic contrasts were convenient for our purposes because the two “middle” means in the series belonged to the Hebephile 1 and Hebephile 2 groups; thus, the quadratic contrasts, in effect, tested whether the hebephiles’ penile responses differed from those of the other age-preference groups.

For the heterosexual age-preference groups, linear and quadratic contrasts were performed on mean penile responses to prepubescent girls, pubescent girls, and adult women. Similarly, for the homosexual age-preference groups, linear and quadratic contrasts were performed on mean penile responses to prepubescent boys, pubescent boys, and adult men. The results are presented in Tables 4 and 5.

Table 4 is readily interpreted in relation to Fig. 5. The table shows that the pedophilic groups responded more to the prepubescent girls than did the other groups (linear contrast), the

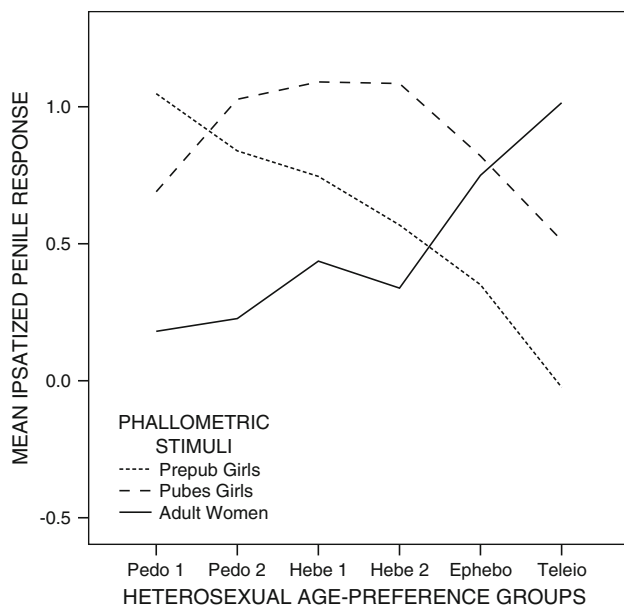


Fig. 5 Mean penile response of the six heterosexual age-preference groups to laboratory stimuli depicting prepubescent, pubescent, and physically mature females—redrawn to emphasize between-groups differences. Prepub Girls, prepubescent females; Pubes Girls, pubescent females; Adult Women, physically mature females

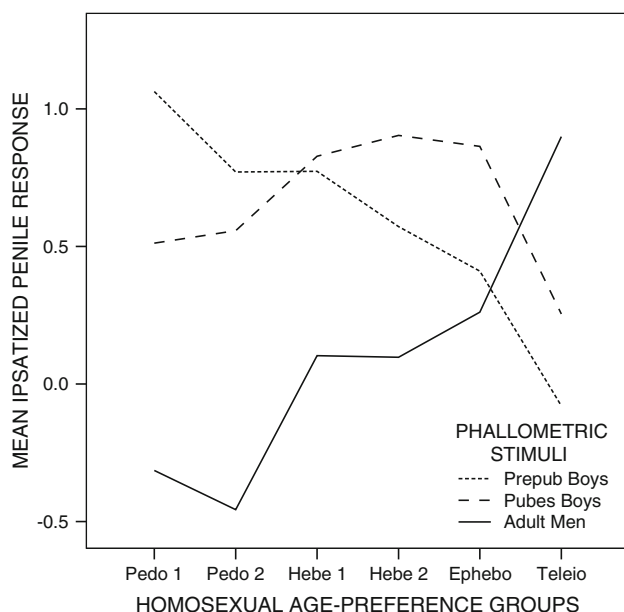


Fig. 6 Mean penile response of the six homosexual age-preference groups to laboratory stimuli depicting prepubescent, pubescent, and physically mature males—redrawn to emphasize between-groups differences. Prepub Boys, prepubescent males; Pubes Boys, pubescent males; Adult Men, physically mature males

hebephilic groups responded more to the pubescent girls than the other groups (quadratic contrast), and the teleiophilic group responded more to the adult women than the other groups (linear contrast). The p -values for these three contrasts were less than .0001.

There were a few “nuisance” results in Table 4 that require a word of explanation. There was a small but statistically significant linear contrast for mean responses to pubescent girls. That was because the inverted-U shape of the dashed line in Fig. 5 was slightly tilted; in other words, the mean response of the Pedophile 1 group was somewhat higher than the mean response of the Teleiophile group. There was also a small but statistically significant quadratic contrast for mean responses to adult women. That was because the increase in means from the Pedophile 1 group to the Hebephile 2 group was less pronounced than the increase from the Hebephile 2 group to the Teleiophile group.

Table 5 can be interpreted in relation to Fig. 6. The table shows that the pedophilic groups responded more to the prepubescent boys than did the other groups (linear contrast), the hebephilic groups responded more to the pubescent boys than the other groups (quadratic contrast), and the teleiophilic group responded more to the adult men than the other groups (linear contrast). The p -values for these three contrasts were less than, or rounded to, .0001. There were no other statistically significant results, possibly because the smaller sample size protected against “nuisance” results.

Discussion

The present study showed that hebephilia exists and—incidentally—that it is relatively common compared with other forms of erotic interest in children. This has two direct implications for the *DSM*, which also apply to clinical research. First, the *DSM-V* should expand the definition of

Table 4 Ipsatized penile response: between-groups comparisons of means for heterosexual participants

Phallometric stimuli	Polynomial contrast			
	Linear		Quadratic	
	<i>F</i> (1, 739)	<i>p</i>	<i>F</i> (1, 739)	<i>p</i>
Prepubescent girls	130.47	<.0001	3.61	n.s.
Pubescent girls	5.63	.02	39.09	<.0001
Adult women	56.33	<.0001	4.92	.03

Table 5 Ipsatized penile response: between-groups comparisons of means for homosexual participants

Phallometric stimuli	Polynomial contrast			
	Linear		Quadratic	
	<i>F</i> (1, 130)	<i>p</i>	<i>F</i> (1, 130)	<i>p</i>
Prepubescent boys	63.32	<.0001	2.44	n.s.
Pubescent boys	0.10	n.s.	17.38	.0001
Adult men	63.94	<.0001	3.56	n.s.

Pedophilia so that it includes erotic attraction to pubescent and prepubescent children or, alternatively, add a separate diagnosis of Hebephilia. If the latter option were chosen, patients attracted to both prepubescent and pubescent children more than to adults could be given both diagnoses (Pedophilia and Hebephilia). That would cover those individuals referred to by Freund, Seeley, Marshall, and Glinfort (1972) as “pedohebephiles.” Another possibility would be to completely replace the diagnosis of Pedophilia with Pedohebephilia and allow the clinician to specify one of three subtypes: Sexually Attracted to Children Younger than 11 (Pedophilic Type), Sexually Attracted to Children Age 11–14 (Hebephilic Type), or Sexually Attracted to Both (Pedohebephilic Type).

Second, the *DSM* diagnostic specifiers, which currently include the gender of children who most attract the patient sexually, should also include the typical age of children who most attract the patient sexually. This second point agrees with the suggestions of several authors that the *DSM-V* should include continuous measures of psychopathology as well as discrete diagnostic categories (Regier, 2007). The age of persons to whom the individual is most attracted would be an ideal continuous measure of erotic age-preference: It has a built-in metric, it corresponds to something in the real world, and it can be interpreted by any clinician without specialized training. It is true that a most-preferred-age item, whether incorporated into a self-administered questionnaire or a structured interview for sex offenders, will elicit many lies and distortions, but that is true of any self-report methodology, and this item has the virtue of simplicity. Examiners might find it useful, in determining the most attractive age for intellectually limited patients, to show them a standard set of nude photographs, line drawings, or silhouettes that illustrate the characteristic body shapes of males and females at all ages from infancy to senescence. Such a set of illustrations might conceivably be obtained from endocrinology texts or other medical sources. The patient could simply pick the image that represents his erotic ideal, and the examiner could record the associated age.

It is relevant here to consider the use of different age-ranges for boys and girls when dichotomously classifying men's sexual targets as pubescent or prepubescent. As noted in the introduction to this article, the pubertal growth spurt in height starts about 2 years earlier for girls than for boys. Other signs of maturation, for example, pubic hair, begin to appear at about the same time in both sexes. One aspect of maturation—fecundity—actually appears earlier in boys than in girls (Wood, 1994, p. 404 and Fig. 9.4). Our study did not attempt to address the question of different age-ranges. One would probably not lose much precision in using the same age-range (e.g., 11 through 14) in designating both male and female children as pubescent, given that the onset of puberty varies from child to child and given that the boundaries of puberty are fuzzy to begin with. Thus, it does not seem absolutely

necessary to use different criteria when diagnosing hebephilia in homosexual and heterosexual men.

Our demonstration of heterosexual hebephilia was more clear-cut than our demonstration of homosexual hebephilia. Our first main conclusion—men who verbally report maximum sexual attraction to pubescent children produce greater penile responses to depictions of pubescent children than to depictions of younger or older persons—applies in full only to heterosexual men. We could not demonstrate that (self-reported) homosexual hebephiles respond more to pubescent boys than to prepubescent boys. One possible reason for this is insufficient statistical power: Our combined number of homosexual pedophiles and hebephiles was less than half our number of heterosexual pedophiles and hebephiles. There are at least two other possible methodological reasons for this discrepant finding: (a) Our prepubescent female models were age 3–11, whereas our prepubescent male models were age 5–11, and (b) the sexual development of the pubescent female models, according to their Tanner ratings, was somewhat less advanced than the sexual development of the pubescent male models. It is difficult to know how, or even whether, these seemingly small differences affected the outcome. It is, of course, conceivable that the results relate to some inherent difference between heterosexual and homosexual hebephiles, but it is impossible, given the above-mentioned inequalities, to conclude that.

The main methodological limitation of the present study was the absence of models age 15–18 (mid- to late-adolescence) among the phallometric stimuli. That made it impossible to directly validate self-reports of ephebophilia. On the positive side, our cumbersome method of pinpointing the participant's erotic age-preference appears to have worked tolerably well, although we would not necessarily recommend it to other researchers. It seems probable that the simply query, “What is the typical age of persons who most attract you sexually,” would obtain the same information more simply, although it might require some follow-up questions before a single value could be recorded.

The study produced various findings that lay outside our main focus but are nonetheless of theoretical interest. First, the phallometric profiles of the homosexual participants generally paralleled those of the heterosexual participants. Thus, the homosexual pedophiles differentiated between prepubescent boys and adult men just as well as the heterosexual pedophiles differentiated between prepubescent girls and adult women; the homosexual and heterosexual teleiophiles also distinguished between children and adults of their preferred gender to similar degrees (compare Figs. 3 and 4). This parallelism had previously been demonstrated for homosexual and heterosexual teleiophiles (Freund et al., 1973), but not for homosexual and heterosexual pedophiles.

Second, there was a remarkable concordance between the participants' self-reported age-preferences and their phal-

lometric profiles. This shows that penile response in the laboratory can be a fairly sensitive measure of erotic preferences in cooperative participants. The inherent limitations of the phallometric method are not the technical problems in measuring penile blood volume or the creative problems in devising effective stimuli for a range of paraphilics, but rather the willingness and ability of uncooperative men to affect the test outcome. Outside the criminal justice system and its associated clinics—where it is primarily used as a blunt instrument in diagnosing paraphilia in nonadmitters (e.g., Blanchard et al., 2001; Freund & Blanchard, 1989)—the phallometric method is probably underutilized for examining subtle theoretical questions regarding erotic preferences.

Third, our missing data on ephebophilia notwithstanding, erotic age-preferences appear to constitute a continuum rather than a series of discrete taxa. This is not surprising, when one considers the continuous nature of human physical development. Human beings, unlike butterflies, do not disappear in one form and reappear in another. The continuous nature of erotic age-preferences does not, however, tell us anything about etiology. It does not, for example, imply that pedophilia and hebephilia have the same etiology, with the difference between them reflecting some kind of dosage effect. It is quite possible, in fact, that both variant age-preferences have multiple etiologies (Blanchard et al., 2002; Seto, 2008, p. 210). This appears to be the case for variant erotic gender-preference: A substantial amount of evidence indicates that homosexuality has one cause (or set of causes) in right-handed men and another cause in non-right-handed men (Blanchard, 2008). It would almost be surprising if multiple etiologies did not contribute to pedo- and hebephilia.

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