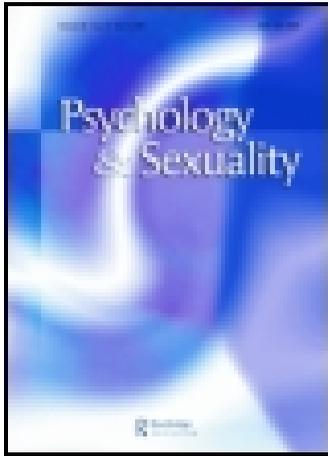


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## Development of a brief measure of attitudes towards polyamory

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Due to its increasing popularity as a relationship style, empirical research on polyamory and its practitioners has flourished over the past decade. More recently, researchers are beginning to explore others' attitudes towards polyamory. To support future work in this area, we created a 7-item measure of attitudes towards polyamory and validated it in three samples. Sample 1 used 100 US adults to create the initial version of the Attitudes Towards Polyamory (ATP) Scale. In Sample 2, the responses of 134 US college students were used to revise the scale and to obtain evidence for construct validity and test-retest reliability. Sample 3 employed 196 US adults to confirm the factor structure of the scale and to further establish convergent and divergent validity. As expected, participants who held more traditional beliefs (such as favourable attitudes towards monogamy, politically conservative beliefs and fundamentalist religious beliefs) were more likely to have negative attitudes towards polyamory, whereas participants exhibiting thrill-seeking attitudes and behaviours were more likely to have positive attitudes towards polyamory. Our results indicate that the ATP Scale is a brief, reliable and valid measure that can be used in future research to assess people's attitudes towards the polyamorous relationship orientation.

**Keywords:** polyamory; nonmonogamy; measure; attitudes; scale; relationships

In their controversial book, *Sex at Dawn*, Ryan and Jethá (2010) cite evidence from anthropology, primatology, anatomy and archaeology to argue that monogamy is constructed by societal values (rather than driven by human evolutionary pressures) and that many relationship woes, such as infidelity and gradual loss of passion within marriages, are due to a divergence from this evolutionary path. The popularity of the book, a *New York Times* bestseller, reflects growing societal awareness of and interest in nonmonogamy. However, Ryan and Jethá (2010) faced backlash when publishing *Sex at Dawn*, highlighting the challenge of a predominantly monogamous culture simultaneously expressing interest in nonmonogamy while questioning the morality and potential for long-term success of nonmonogamous relationships.

Public discussion of – and increased empirical attention to – consensual nonmonogamy (i.e., a relationship style wherein all parties agree to extradyadic sexual or emotional relationships; Conley, Moors, Matsick, & Ziegler, 2013) has become especially popular in recent years, in part due to the publication of books such as *Sex at Dawn* and *The Ethical Slut*, a 'how to' guide for consensual nonmonogamy (Easton & Hardy, 2009; Easton & Liszt, 1997). Moreover, the increasing national discussion of same-sex marriage over the last decade indicates a movement away from traditional relationship styles and the concept of the 'nuclear family' (Chamie & Mirkin, 2011). Both of these phenomena indicate that we are in the midst of a new sexual revolution, one that includes a more open

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discussion about all types of non-traditional relationships, including those that are non-monogamous in nature.

One nonmonogamous relationship style attracting particularly high levels of attention is polyamory, which has been practised for decades in the US (Klesse, 2006). The term ‘polyamory’ translated directly from Greek and Latin means ‘multiple loves’ (Barker, 2005), and was coined as a more palatable alternative to ‘nonmonogamy’ (Sheff, 2014). Although there is no single agreed-upon definition, we prefer the one offered by Haritaworn, Lin, and Klesse (2006, p. 215): ‘Polyamory describes a form of relationship where it is possible, valid, and worthwhile to maintain (usually long-term) intimate and sexual relationships with multiple partners simultaneously’. Polyamorous relationships generally subscribe to a set of core values that include honesty, equality, openness and high levels of communication and intimacy (Klesse, 2006; Sheff, 2014). Importantly, people who participate in polyamorous relationships often report a positive impact on their lives and personal development. For example, Sheff (2005, 2006, 2014) argues that the polyamorous relationship orientation supports men’s fluidity and women’s sexual power and autonomy, which appeals to men and women who feel confined by the strictures of traditional monogamous relationships.

The rising popularity of polyamory is also likely perpetuated by high divorce and infidelity rates in the US, which can be interpreted as reflecting the difficulty of maintaining monogamous relationships. In fact, at the end of the twentieth century it was predicted that 43–46% of marriages would end in divorce (Amato, 2010), a rate that is presumably at least somewhat accounted for by high rates of infidelity (approximately 50% of both married men and married women; Scarf, 1988). As such, some people may find the openness and honesty of a polyamorous relationship to be an appealing alternative to the (ostensibly) monogamous nature of marriage and the accompanying threat of infidelity and divorce. Studies have shown that 4–5% of Americans report being currently involved in some form of polyamory or consensual nonmonogamy<sup>1</sup> (Conley, Ziegler, Moors, Matsick, & Valentine, 2013), although this number is almost certainly an underestimate, as are most estimates of stigmatised behaviours.

Partially as a result of its increasing popularity, polyamory has garnered a great deal of empirical attention since 2006, when a special issue of the journal *Sexualities* issued a call for more research in this area (Haritaworn et al., 2006). Early on, research focused primarily on qualitative studies and/or the self-perceptions of people who identify as polyamorous (Barker & Langdrige, 2010). A recent flurry of articles quantitatively examining the viability of polyamorous relationships (e.g., Conley, Moors, et al., 2013; Conley, Ziegler, et al., 2013; Morrison, Beaulieu, Brockman, & O Beaglaoich, 2013; Sheff, 2010) suggests that interest in pursuing these relationships is growing rather than waning. Polyamory’s relevance to present day discussions on sexuality and relationships is further demonstrated by the fact that researchers are now starting to assess public attitudes towards these and other nonmonogamous relationship styles (e.g., Burris, 2013; Hutzler, Giuliano, Herselman, & Johnson, *in press*; Matsick, Conley, Ziegler, Moors, & Rubin, 2013), indicating there is sufficient value and interest in polyamory to warrant more widespread empirical attention.

Although there is no measure we are aware of that reliably assesses attitudes towards polyamory, research has shown that polyamorous people face stigma and misconceptions outside their communities. For instance, people who identify as polyamorous face stigma from family and friends, therapists and even employers for their unconventional relationship choices (Conley, Ziegler, et al., 2013; Ley, 2009; Weitzman, 2006). Such stigma is amplified when there are children in the family, out of concern for children’s development (Pallotta-Chiarolli, 2010; Sheff, 2014). Not surprisingly, polyamorous practitioners want

their relationship style to be recognised as a viable option, without having to face the prejudice and discrimination they currently experience (Sheff, 2014; Weitzman, 2006). As such, we sought to develop a reliable and valid measure of attitudes towards polyamory, which in future research can function as a measure of prejudice towards this relationship style and therefore help to assess the potential impact of discrimination on polyamorists' health, romantic relationships and family functioning.

### **Development of the Attitudes Towards Polyamory Scale**

Three samples were recruited for the development and validation of the Attitudes Towards Polyamory (ATP) Scale. In developing the measure, we created a pool of 8 initial items inspired by popular misconceptions of polyamory. Several researchers have shown that polyamorous people, because of their nonmonogamous relationship style, are perceived to be sexually risky and unfaithful to their partners (Barker, 2005; Conley, Moors, et al., 2013); thus, we included items addressing sexually transmitted infection (STI) transmission and infidelity. Similarly, polyamorous people report that public concern regarding the impact of polyamory on children leads others to question their lifestyle (Conley, Ziegler, et al., 2013; Pallotta-Chiarolli, 2010; Sheff, 2010, 2014), so we included an item about polyamorous relationships' effect on children. Next, because a core value of polyamory emphasises honesty and direct communication as crucial in relationships (Barker, 2005; Barker & Langdrige, 2010; Haritaworn et al., 2006; Klesse, 2006; Sheff, 2014), an item addressing open communication was included. Items addressing beliefs about religious forms of polyamory, the ability to be in love with multiple people at one time, the possibility of long-term success in polyamorous relationships and opinions about legal rights for people in polyamorous relationships were also included. From these 8 items, 7 were chosen for the final ATP Scale based on their factor loadings as well as their conceptual fit with our measure (as discussed below).

## **Method**

### ***Participants and procedure***

Three samples (comprising a total of 430 participants) were recruited in the present investigation. These data were part of a larger study investigating attitudes towards types of romantic relationships, but we focus here only on aspects of the data relevant to the validation of the ATP Scale. In the first sample, participants were United States citizens recruited through Mechanical Turk, an online marketplace that solicits and pays participants for completing online tasks, such as surveys (see Buhrmester, Kwang, & Gosling, 2011 for more information on the use and advantages of Mechanical Turk). These data were used for exploratory factor analyses and preliminary convergent and divergent validation of the scale. The second sample, consisting of college students at an American university, was used to further establish convergent and divergent validity and to examine test–retest reliability. The third sample consisted of United States citizens also recruited from Mechanical Turk, and was used for confirmatory factor analyses and an additional analysis of convergent and divergent validity.

In all three samples, participants were surveyed through an online questionnaire, which assessed background information, participants' attitudes towards polyamory and participants' responses to various other personality and attitude measures. Before completing the items addressing attitudes towards polyamory, participants in all three samples

were given a definition to ensure that they had a basic understanding of polyamory. The definition, which was adapted from a popular polyamory online forum (Trask & M, 2013), read as follows:

For the purposes of this study, polyamory is the practice, desire, or acceptance of having more than one intimate relationship at a time with the knowledge and consent of everyone involved (i.e., the practice of having more than one romantic relationship at a time).

### *Sample 1*

The first sample included 100 US citizens (38 women, 62 men) who ranged in age from 18 to 63 years, with a mean age of 32.29 years ( $SD = 11.18$ ). Participants were recruited through the advertisement of a study exploring ‘perceptions about different kinds of romantic relationships’ on the Mechanical Turk online marketplace and were compensated between \$0.20 and \$0.50 for completing the survey. In this sample, the participants were predominantly White, with 77% self-identifying as White/European-American, 7% self-identifying as African-American, 6% self-identifying as Asian-American, 6% self-identifying as Hispanic-American, 1% self-identifying as Native-American and 2% self-identifying as multiracial.

### *Sample 2*

The second sample was conducted in two waves, approximately 20 days apart, to examine the temporal stability (i.e., test–retest reliability) of attitudes towards polyamory. Participants who completed both waves in the second sample consisted of 134 college students (83 women, 50 men and one participant who identified as ‘other’) who ranged in age from 18 to 31, with a mean age of 20.16 years ( $SD = 1.77$ ). In this sample, undergraduates were recruited through social networking, online campus message boards and word-of-mouth from a small liberal arts college in central Texas. As in Sample 1, participants were predominantly White, with 82.8% self-identifying as White/European-American.

### *Sample 3*

The third sample consisted of 196 US citizens (92 women, 102 men and 2 who identified as ‘other’) who ranged in age from 18 to 79 years, ( $M = 33.28$ ,  $SD = 12.09$ ). Participants, who were predominantly White (80.1%), were recruited and compensated in the same manner as in Sample 1.

## **Measures**

### *Attitudes Towards Polyamory Scale*

In Sample 1, we generated 8 initial items ( $\alpha = .87$ ) as part of our attempt to create a brief, unidimensional ATP Scale. In Samples 2 and 3, the scale was modified to 7 items ( $\alpha = .86$ ; See Table 1) based on the results of an exploratory factor analysis as described in a subsequent section. All items were measured on a 7-point Likert scale anchored at 1 (*Disagree Strongly*) and 7 (*Agree Strongly*).

Table 1. Items and factor loadings of the ATP Scale.

Item in ATP Scale	Factor loading
Polyamory is harmful to children (R)	.84
Polyamorous relationships can be successful in the long term	.79
I think that committed relationships with more than two individuals should have the same legal rights as married couples	.75
People use polyamorous relationships as a way to cheat on their partners without consequence (R)	.74
I would allow my children to spend time with a peer who had polyamorous parents	.70
Polyamorous relationships spread STIs (sexually transmitted infections) (R)	.70
Religious forms of polyamory (such as polygamy) are acceptable	.64

Notes: Items were rated from 1 (*Disagree Strongly*) to 7 (*Agree Strongly*). (R) denotes reverse-coded item.

### *Descriptives*

In all three samples, participants responded to items assessing age, gender, ethnicity, highest education achieved, personal relationship history and sexual orientation. To measure personal relationship history, we asked participants to disclose their current relationship status, the number of committed relationships they had been in and the length of their longest relationship. Sexual orientation was measured by a single item ranging from 0 (*Exclusively Other-Sex Attraction*) to 6 (*Exclusively Same-Sex Attraction*; Kinsey, Pomeroy, & Martin, 1948; Kinsey, Pomeroy, Martin, & Gebhard, 1953).

### *Attitudes towards monogamy*

Because polyamory strongly challenges ‘mononormativity’ (i.e., the dominant assumption in society that monogamy is the ‘natural’ and ‘normal’ relationship orientation; Barker & Langdrige, 2010), we predicted that favourable attitudes towards monogamy would be negatively related to attitudes towards polyamory. Therefore, we created a 2-item index ( $\alpha = .71$ ) of attitudes towards monogamy that included the following statements: ‘I believe that monogamy is the normal orientation for relationships’, and ‘I believe that humans are biologically predisposed to be monogamous’. These items were rated on a scale from 1 (*Disagree Strongly*) to 7 (*Agree Strongly*).

### *Political conservatism*

Polyamory, as a relationship orientation, breaks traditional relationship formations; as such, we expected that favourable attitudes towards polyamory would be negatively related to participants’ levels of political conservatism. Political conservatism was assessed using one item (‘What is your political orientation?’) measured on a scale ranging from 1 (*Very Liberal*) to 5 (*Very Conservative*).

### *Religious fundamentalism*

In order to examine the relationship between attitudes towards polyamory and religious attitudes, we used items adapted from the Revised 12-item Religious Fundamentalism Scale (Altemeyer & Hunsberger, 2004). Specifically, 8 items (e.g., ‘God has given humanity a complete, unflinching guide to happiness and salvation, which must be totally

followed', 'The fundamentals of God's religion should never be tampered with, or compromised with others' beliefs';  $\alpha = .94$ ) were used to assess religious fundamentalism, measured on a 7-point Likert scale. Due to its focus on strict adherence to religious doctrine, religious fundamentalism was expected to correlate negatively with the ATP Scale and thus was included to establish convergent validity.

#### *Right-wing authoritarianism*

As a relationship style, polyamory challenges the traditional relationship structure. As such, we predicted that favourable attitudes towards polyamory would be negatively correlated with right-wing authoritarianism, which refers to a person's willingness and desire to comply with established rules and authority (Altemeyer, 1988). Participants' right-wing authoritarianism was measured through a 10-item index (including the items, 'It is always better to trust the proper authorities in government and religion than to listen to the noisy rabble-rousers in our society who are trying to create doubt in people's minds' and 'The "old fashioned ways" and the "old fashioned values" still show the best way to live';  $\alpha = .90$ ) adapted from the Right-Wing Authoritarianism Scale (Altemeyer, 2006) and measured on a 7-point Likert scale ranging from 1 (*Disagree Strongly*) to 7 (*Agree Strongly*).

#### *Sensation seeking and sexual sensation seeking*

We predicted that reports of thrill-seeking attitudes and behaviours would be positively correlated with favourable attitudes towards polyamory, given the novelty that having multiple romantic partners may bring (Conley, Ziegler, et al., 2013). Specifically, we expected that individuals with higher levels of general sensation seeking (and higher levels of sexual sensation seeking in particular) would be more likely to report favourable attitudes towards polyamory, given the presumed heightened sexual component of polyamorous relationships. We measured participants' general sensation seeking (e.g., 'I like new and exciting experiences, even if I have to break the rules') through the 4-item Brief Sensation Seeking Scale ( $\alpha = .85$ ; Stephenson, Hoyle, Palmgreen, & Slater, 2003) with anchors at 1 (*Strongly Disagree*) and 5 (*Strongly Agree*). Participants' sexual sensation seeking was assessed by 10 items (e.g., 'I like wild "uninhibited" sexual encounters', 'I am interested in trying out new sexual experiences';  $\alpha = .89$  and  $.92$  for men and women, respectively) from the Sexual Sensation Seeking Scale (Kalichman et al., 1994), which ranged from 1 (*Not at all Like Me*) to 4 (*Very Much Like Me*).

#### *Erotophobia/erotophilia*

As a nonmonogamous relationship orientation, polyamory implies romantic and sexual intimacy with multiple partners; therefore, we predicted that favourable attitudes towards polyamory would be related to positive and open attitudes towards sex. To assess emotional responses to sexual subjects, 5 items (including, 'The thought of engaging in unusual sex practices is highly arousing' and 'Masturbation can be an exciting experience';  $\alpha = .73$ ), all measured on a scale from 1 (*Disagree Strongly*) to 7 (*Agree Strongly*), were taken from the Sexual Opinion Survey – short form (Ostovich & Sabini, 2004).

*Sexual risk-taking*

Although polyamorous people pride themselves in taking responsibility for their sexual health (Conley, Ziegler, et al., 2013), it is a common misconception that people who engage in polyamorous relationships are high in sexual risk-taking (Barker, 2005; Conley, Moors, et al., 2013). Therefore, we predicted that participants who reported higher levels of sexual risk-taking would also report more favourable attitudes towards polyamory. Participants' sexual risk-taking was measured using two items (i.e., 'With how many different partners have you had sex in the past 12 months?' and 'With how many different partners have you had sexual intercourse on one and only one occasion?') from the *Past Sexual Experiences* component of the revised Sociosexual Orientation Inventory (SOI-R; Penke & Asendorpf, 2008) and one additional item (from Seal & Agostinelli, 1994; 'With how many partners have you had sex during the past 3 years with whom no condoms were used?'). These items were measured on a scale from 1 (0) to 9 (20 or More).

*Need for sex*

Participants responded to 8 items from the *Need for Sex* dimension of the Need for Sexual Intimacy Scale (including the items, 'I need sex every day' and 'I need sex with a lot of partners';  $\alpha = .88$ ; Marelich & Lundquist, 2008), measured on a scale from 1 (*Disagree Definitely*) to 5 (*Agree Definitely*). We predicted that participants who reported a greater need for sex would also report more favourable attitudes towards polyamory, due to the presumably increased chances of sexual activity that multiple partners may bring.

*Jealousy*

Based on Conley, Ziegler, et al.'s (2013) argument that the Multidimensional Jealousy Scale (MJS; Elphinston, Feeney, & Noller, 2011) has a promonogamy bias, we expected that high levels of emotional jealousy (as measured by the emotional component of the MJS) would be negatively related to favourable attitudes towards polyamory. Specifically, participants' emotional reactions to several different situations were measured using 6 items from the MJS ( $\alpha = .81$ ; e.g., 'Your partner hugs and kisses someone of the opposite sex'; 'Someone of the opposite sex is dating your partner'). All items were measured on a 7-point scale, ranging from 1 (*Very Pleased*) to 7 (*Very Upset*).

*Self-esteem*

We had no reason to expect that self-esteem would be related to attitudes towards polyamory. Therefore, to establish divergent validity we used Rosenberg's (1965) 10-item measure ( $\alpha = .88$ ), which included statements such as 'I feel that I have a number of good qualities', measured on a Likert scale from 1 (*Disagree Strongly*) to 7 (*Agree Strongly*).

*Social desirability*

Finally, we sought to confirm that participants' responses to the ATP Scale were not contaminated by social desirability. Thus, to establish divergent validity we used Reynolds' (1982) short form of the Marlowe–Crowne Social Desirability Scale, which consists of 13 items (e.g., 'I am always courteous, even to people who are disagreeable';  $\alpha = .70$ ) rated on a scale from 1 (*Disagree Strongly*) to 7 (*Agree Strongly*).

## Results

### *Descriptives*

There were no significant gender differences in attitudes towards polyamory as measured by the ATP Scale: both women ( $M = 3.67$ ) and men ( $M = 4.06$ ) reported equally favourable views towards this relationship orientation,  $t(59.4) = -1.47, p = .15$ . Age predicted attitudes towards polyamory in Sample 1 only, with older participants reporting less favourable views relative to younger participants,  $r(198) = -.24, p = .02$ . Personal relationship history (i.e., length of longest relationship, number of total relationships) did not predict attitudes towards polyamory except in Sample 1, with participants who had been in longer relationships reporting less favourable views of polyamory,  $r(98) = -.274, p = .006$ . Finally, sexual orientation was correlated with attitudes towards polyamory in all three samples, in that the more participants reported being attracted to the same gender, the more likely they were to have favourable attitudes towards polyamory,  $r(153) = .34, p < .001$ .

### *Factor structure*

#### *Exploratory factor analysis*

The preliminary 8-item ATP Scale from Sample 1 was subjected to a principal components analysis with varimax rotation, which revealed one factor (*eigenvalue* = 4.32) that accounted for 54.1% of the variance. The 8 items used in Sample 1 had factor loadings whose absolute values ranged from .59 to .87, and the measure achieved high internal consistency ( $\alpha = .88$ ). Although the scale's factor structure and internal consistency were good, we chose to revise the scale slightly to make it shorter and more cohesive. Specifically, because we recognised that two of the items could be used to assess understanding of polyamory rather than attitudes towards the relationship style, these items (i.e., 'Polyamorous relationships have more open communication than monogamous relationships' and 'It is possible to be in love with multiple individuals at the same time') were removed from the scale. In addition, because of the importance placed on perceptions of the effect of polyamory on children (Conley, Ziegler, et al., 2013), we also added one item (i.e., 'I would allow my child to spend time with a peer who had polyamorous parents'). For the revised version of the scale, a principal components analysis with varimax rotation in Sample 2 yielded a single factor (*eigenvalue* = 3.83) that accounted for 54.8% of the variance; the 7 items had factor loadings whose absolute values ranged from .64 to .84 (as shown in Table 1), and internal consistency remained high ( $\alpha = .86$ ).

#### *Confirmatory factor analysis*

Because the exploratory factor analysis in Sample 2 identified a single factor underlying the 7 items on the ATP Scale, we used the data from Sample 3 to conduct a confirmatory factor analysis, allowing the items to load on a single latent factor. The results suggested that the unidimensional model of attitudes towards polyamory (as captured by the 7 items) fit the data quite well:  $\chi^2(14) = 38.10, p = .001, NFI = .947, CFI = .965, GFI = .943$ .

### *Reliability*

#### *Internal consistency*

The internal consistency of the ATP Scale across all three samples ( $\alpha = .88, .86$  and  $.87$ , respectively) was high.

*Test-retest reliability*

Participants in Sample 2 completed the ATP Scale twice; the mean number of days between the two waves was 20.34 ( $SD = 2.29$  days; range: 12–30 days). Participants' attitudes towards polyamory as measured at Time 1 were strongly positively correlated with their attitudes towards polyamory at Time 2,  $r(128) = .89$ ,  $p < .001$ , indicating that scores on the ATP Scale exhibit good temporal stability.<sup>2</sup>

**Validation***Convergent validity*

To establish convergent validity, we correlated the ATP Scale with measures that should be conceptually related to attitudes towards polyamory. As expected, attitudes towards polyamory were negatively correlated with traditional views and values, but positively correlated with thrill-seeking attitudes and behaviours. The results of these analyses can be found in Table 2.

*Traditional views and values.* Participants' political conservatism, religious fundamentalism and attitudes towards monogamy were all related to the ATP Scale in the predicted direction, as shown in Table 2. That is, as participants reported more politically conservative attitudes, more religious fundamentalism and more favourable attitudes towards monogamy, they were less likely to have positive attitudes towards polyamory. Additionally, right-wing authoritarianism (i.e., the desire to follow established authorities in society) was related to the ATP Scale in the predicted direction. As participants reported more right-wing authoritarianism, they were less likely to have positive attitudes towards polyamory.

Table 2. Correlations between the ATP Scale and measures of validation.

Measures	Sample	ATP	<i>df</i>	<i>M</i>	<i>SD</i>	<i>Range</i>
Political conservatism	1	-.41***	98	2.49	1.12	1–5
	2	-.48***	153	2.49	1.11	1–5
	3	-.40***	194	2.51	1.17	1–5
Religious fundamentalism	2	-.56***	152	2.57	1.62	1–6.5
	2	-.63***	152	4.11	1.40	1.33–7
Attitudes towards monogamy	3	-.66***	194	4.56	1.78	1–7
	2	-.65***	152	2.40	1.14	1–6.8
Right-wing authoritarianism	3	.57***	193	4.86	1.27	1.2–7
Erotophilia	1	.31***	198	3.28	.95	1–5
Sensation seeking	3	.33***	190	2.52	.70	1–4
Sexual sensation seeking	3	.17*	193	3.01	.89	1–5
Need for sex	3	.17*	192	2.61	1.41	1–7.33
Sexual risk-taking	2	-.22**	121	2.57	.79	1.17–6.33
Emotional jealousy	3	-.35***	194	2.49	1.06	1–6
	2	.05	152	5.30	1.06	2.2–7
Self-esteem	2	.07	152	4.22	.77	2.15–6.08
Social desirability	2					

Notes: \*\*\*  $p < .001$ ; \*\*  $p < .01$ ; \*  $p < .05$ . Some of the measures were included in more than one sample, and thus results from each sample assessed are shown.

*Thrill-seeking attitudes.* We also expected that attitudes towards polyamory would be positively correlated with thrill-seeking attitudes. Consistent with predictions, erotophilia (Ostovich & Sabini, 2004) was strongly positively correlated with the ATP Scale, in that the more likely participants were to report being sex-positive and open, the more likely they were to report positive attitudes towards polyamory. As Table 2 shows, sensation seeking and sexual sensation seeking were also positively correlated with the ATP Scale, as expected: participants who reported being higher in sensation seeking (in general or with respect to sexuality) were more likely to report favourable attitudes towards polyamory.

*Thrill-seeking behaviours.* Participants' self-reported need for sex was moderately positively correlated with the ATP Scale, in that individuals with a higher need for sex reported more favourable attitudes. Table 2 also shows that participants' sexual risk-taking was related to their attitudes towards polyamory: the more sexual risk-taking they reported in their past, the more likely they were to report favourable views of polyamory.

*Jealousy.* As predicted, participants' level of emotional jealousy (Elphinston et al., 2011) was negatively correlated with the ATP Scale (see Table 2). The more emotionally upset participants reported being at the thought of their partner flirting with, dating, being excited at talking to, hugging or kissing someone outside the relationship, the less likely they were to report favourable attitudes towards polyamory. It seems plausible that people who score lower on the emotional jealousy component of the MJS are more likely to understand the polyamorous idea of 'compersion' (i.e., the pleasure gained from knowing that your partner is happy with another person; Barker, 2005) and therefore are more likely to view polyamory as a valid relationship option.

#### *Divergent validity*

To establish divergent validity, we correlated the ATP Scale with measures that should be conceptually unrelated to attitudes towards polyamory. As Table 2 shows, attitudes towards polyamory were not significantly related to self-esteem or social desirability.

### **Discussion**

In three samples, we created and validated a scale to provide a method for examining people's attitudes towards polyamory. In short, the ATP Scale is a brief, reliable measure of individual differences in attitudes towards the polyamorous relationship orientation. The exploratory and confirmatory factor analyses provided strong support for the structure of the ATP Scale. In addition to confirming its unidimensional structure, our results also established preliminary evidence for the convergent and divergent validity of the scale. In the present study, attitudes towards polyamory were negatively related to traditional values (e.g., religious fundamentalism and political and social conservatism) and positively related to thrill-seeking sexual attitudes and behaviours (e.g., sensation seeking, sexual sensation seeking, erotophilia and need for sex), but were not associated with unrelated characteristics (i.e., social desirability and self-esteem). Our results suggest that the ATP Scale measures what it is intended to measure: individual attitudes towards polyamory. That is, people who hold more traditional values feel negatively about a relationship style that conflicts with their values and with societal norms, whereas people who hold more thrill-seeking sexual attitudes may be more comfortable with the concept

of a non-traditional relationship style. However, the modest degree of overlap implies that the ATP Scale is predominantly measuring individual differences that are more specific to attitudes towards polyamory than to traditional beliefs or to thrill-seeking sexual attitudes and behaviours.

Although our results substantiate the factor structure and construct validity of this new, brief measure, some limitations should be acknowledged. First, all three samples completed the survey online. In research conducted exclusively online, there is a greater possibility for selection bias, which can be problematic when trying to assess general attitudes towards a relationship style (Stulhofer, Busko, & Brouillard, 2010). People who volunteered to participate in our study, for example, could have characteristics that differentiate them from the general population, such as greater knowledge of or interest in nonmonogamous relationships. Nonetheless, research has shown that samples using Mechanical Turk are more demographically diverse than are other online samples, and are much more demographically diverse than are typical college student samples (Buhrmester et al., 2011). Another important limitation is that our measure was validated in a single culture – one that is Western and predominantly monogamous – and thus its generalisability to different cultures' attitudes towards polyamory remains to be seen. Culture has been shown to predict how successfully nonmonogamous relationships develop and function (Haritaworn et al., 2006; Khasawneh, Hijazi, & Salman, 2011; Noel, 2006). For example, Khasawneh et al. (2011) found that polygamous families' functioning was normal in Jordan, a place where polygamy is accepted by the culture and the dominant religion, Islam. As such, future research should validate the scale in other cultures, particularly those in which nonmonogamous orientations are more common than in the United States.

Despite these limitations, the ATP Scale is the only known measure of attitudes towards the polyamorous relationship orientation. Because opinions about polyamory as a relationship style tend to be very polarised, the development and validation of the ATP Scale is both timely and relevant. Despite studies showing that polyamory is a popular relationship orientation – estimates are that it is actively practised by 1.2–9.9 million Americans (Sheff, 2014) – practitioners and their families face overwhelming stigma against their lifestyle. Polyamory strongly challenges societal ideals of mononormativity (i.e., the assumption that monogamy is the 'natural' and 'normal' relationship orientation; Barker & Langdrige, 2010), which causes polyamorous people to be careful about 'outing' themselves to family and friends (Pallotta-Chiarolli, 2010; Sheff, 2010, 2014). Even when people in polyamorous relationships seek confidential help or advice, therapists have historically been judgmental of their lifestyle – often urging them to turn to a monogamous relationship (Hymer & Rubin, 1982; Knapp, 1975; Ley, 2009; Weitzman, 2006). Moreover, because there are no legal protections for polyamory, polyamorous people can be fired for their relationship orientation and in some cases can have their children removed from their custody (Conley, Ziegler, et al., 2013). Not surprisingly, in a recent survey of 4000 polyamorous practitioners, 25.8% of participants indicated that they had faced discrimination in the past 10 years for being polyamorous (Cox, Fleckenstein, & Bergstrand, 2013).

The combination of stigma and discrimination against polyamorous people creates concerns for their health and well-being. Research has shown that people who face discrimination and marginalisation of their relationships are more likely to have poor health and to engage in certain risky health behaviours, such as smoking (Conley & Moors, 2014; Lehmiller, 2012). Another recent study found that sexual minorities (i.e., gays, bisexuals and lesbians) are more likely to suffer premature death, and there is an astonishing average of 12 years' difference in life expectancy from sexual minorities who live in areas of high

(vs. low) structural stigma (Hatzenbuehler et al., 2014). Taken together, research has shown that the health consequences of stigma and discrimination facing polyamorous people are significant and potentially severe. As such, the ATP Scale can function as a valuable tool to assess these attitudes in the public, a need made more apparent by the possible effects of stigma and discrimination on polyamorists indicated above.

In contrast to general society's views, polyamorists fervently believe that their relationships are valid and legitimate, and many of these beliefs have been supported by recent research (e.g., Sheff, 2014). For example, Morrison et al. (2013) found that people in polyamorous and monogamous relationships did not differ in their levels of passionate love or trust. Other research has confirmed that polyamorous people are able to have healthy, satisfying relationships (Cook, 2005; Cox et al., 2013; Mitchell, Bartholomew, & Cobb, 2014; Sheff, 2014). In part because of the stigma and discrimination they face, as well as their belief that polyamory is a legitimate relationship style, people who identify as polyamorous (with numbers similar to those who identify gay, lesbian or bisexual) are beginning to form a more cohesive identity (Tweedy, 2010). Specifically, polyamorous communities are mobilising towards recognition of their political and legal rights (e.g., rights to custody over children) and battle against discrimination (Barker & Langdridge, 2010; Tweedy, 2010). The increasing pride, fight against stigma and discrimination, and legal and political mobilisation of polyamorous practitioners are all indicators that the polyamorous relationship style is developing into a sustained movement and is a crucial part of the continuing discussion on sexuality, relationships and family. Therefore, it is likely that participation in such relationships may continue to rise, and the ATP Scale will function as a reliable means of gauging public attitudes towards the relationship orientation.

As a measure, the ATP Scale is well suited for use in future research on polyamory as the relationship style grows into a more widely recognised identity. As one example, in the battle against discrimination – especially with children, which is a cultural pressure point for any non-traditional family – the ATP Scale might be used to spotlight the stigma that polyamorous families face in their communities. Furthermore, the ATP Scale could be used in future research that empirically assesses children's functioning in the family. That is, because as a measure of attitudes it can also serve as an indirect measure of stigma in society, the ATP Scale could potentially show that children's functioning is affected by discrimination against their parents and families (rather than by their parents' polyamorous lifestyle), as some have suggested (e.g., Sheff, 2014). In conclusion, it should be noted that our intent in creating this scale is neither to help celebrate polyamory as superior or to criticise it as inferior (see Barker & Langdridge, 2010 for a discussion of the effects of polarising research on polyamory). Instead, we acknowledge that, for some individuals, polyamory can be a valid, successful alternative to traditional monogamous relationships (Conley, Ziegler, et al., 2013; Sheff, 2014), and contend that given the potential consequences, it is worthwhile to measure others' reactions to such choices.

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## Notes

1. Caution should be used in generalising from this figure, which is an estimate based on a non-representative American sample.
2. Of the 154 participants who completed Wave 1, 20 did not complete Wave 2. Analyses confirmed that there were no significant differences (all  $t$ s < 1.05,  $p$ s > .29) on any of the validation measures (political conservatism, religious fundamentalism, attitude towards monogamy, right-wing authoritarianism, emotional jealousy, self-esteem or social desirability) between participants who dropped out and participants who completed both waves.

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