Journal of Research in Personality 66 (2017) 38–45

Contents lists available at ScienceDirect

Journal of Research in Personality

journal homepage: www.elsevier.com/locate/jrp

Is Virginia for lovers? Geographic variation in adult attachment orientation

William J. Chopik [a,*], Matt Motyl [b]

[a] Department of Psychology, Michigan State University, East Lansing, United States
[b] Department of Psychology, University of Illinois, Chicago, United States

ARTICLE INFO

Article history:
Received 22 March 2016
Revised 4 December 2016
Accepted 17 December 2016
Available online 21 December 2016

Keywords:
Attachment
Regional differences
Close relationships
Geography
Social ecology

ABSTRACT

People often use relationships to characterize and describe places. Yet, little research examines whether people's relationships and relational style vary across geography. The current study examined geographic variation in adult attachment orientation in a sample of 127,070 adults from the 50 United States. The states that were highest in attachment anxiety tended to be in the mid-Atlantic and Northeast region of the United States. The states that were highest in attachment avoidance tended to be in the frontier region of the United States. State-level avoidance was related to state-level indicators of relationship status, social networks, and volunteering behavior. The findings are discussed in the context of the mechanisms that may give rise to regional variation in relational behavior.

1. Introduction

People often use relationships to characterize and describe places. Philadelphia is the city of brotherly love. Hershey, PA is the sweetest place on Earth. Virginia is for lovers. Many of these sayings and mottos express people's affection for these places. However, do people from these places differ in their degree of affection for each other and how they approach relationships with others? The current study examines geographic variation in adult attachment orientation in a large sample from all 50 United States. We also tested the hypothesis that geographic variation in attachment orientation would be related to state-level indicators of relational behavior and well-being, including marriage/divorce, living alone, and volunteer behavior.

An individual's attachment orientation is generally conceptualized as his/her position on two distinct dimensions: anxiety and avoidance (Fraley & Waller, 1998). Attachment-related anxiety reflects a preoccupation with the availability of close others and a hypervigilance to signs of rejection and abandonment (Mikulincer, Gillath, & Shaver, 2002). The avoidance dimension reflects a discomfort with intimacy and is characterized by chronic attempts to inhibit and minimize expressions of distress (Edelstein & Shaver, 2004; Fraley, Davis, & Shaver, 1998). Individuals reporting low scores on both dimensions are generally considered secure.

1.1. Geographic variation in attachment and relational behavior

Individuals from different geographic regions vary considerably with respect to their psychological characteristics (Park & Peterson, 2010; Rentfrow, Gosling, & Potter, 2008). For example, in a combined sample of over 1.5 million participants, Rentfrow et al. (2013) demonstrated that distinct psychological profiles derived from Big 5 personality characteristics can describe large geographic areas within the United States. For example, Middle America can be characterized as "Friendly and Conventional" as residents of these areas tend to be sociable, considerate, dutiful, and traditional. The West Coast, Rocky Mountain area, and the Sunbelt regions can be characterized as "Relaxed and Creative" as residents from these areas tend to be wealthy, (mostly) politically liberal, and economically innovative. The Mid-Atlantic and Northeast regions can be characterized as "Temperamental and Uninhibited" as residents from these areas tend to be reserved, aloof, impulsive, irritable, and inquisitive.

Although some research has demonstrated differences in adult attachment orientation *between* countries (Chopik & Edelstein, 2014; Schmitt et al., 2004), the current study is the first to examine geographic variation in attachment *within* a particular country, namely the United States. Why would one expect geographic variation in adult attachment orientation? Many of the mechanisms

* Corresponding author at: Department of Psychology, Michigan State University, 316 Physics Rd., East Lansing, MI 48824, United States.
E-mail address: chopikwi@msu.edu (W.J. Chopik).

http://dx.doi.org/10.1016/j.jrp.2016.12.004
0092-6566/

hypothesized to give rise to the emergence of geographic variation focus on selective migration/mobility (e.g., people choosing to move to or remain in a certain place for some reason). People tend to migrate to areas where their neighbors share similar occupations, ideologies, and even personalities (Florida, 2008; Rentfrow et al., 2008). Similar processes might also explain why individuals with different attachment orientations might live in particular areas.

Rentfrow et al. (2013) suggest that states in the Atlantic and Northeastern United States report higher levels of neuroticism because emotional contagion forces may be at work, such that the negative affect of one's friends and family might make individuals more temperamental (Fowler & Christakis, 2008). They also suggest that, because neuroticism predicts residential *immobility*, that many of the less neurotic individuals have moved to different areas within the US in previous generations (Jokela, 2014). This observation is supported by this region's lower rate of residential mobility (Rentfrow et al., 2013). Regional variation in the frequency of genetic alleles related to social sensitivity and anxiety may also explain why the Atlantic and Northeastern states have higher anxiety (Murakami et al., 1999; Way & Lieberman, 2010), particularly because attachment anxiety has a larger heritable component compared to attachment avoidance (Brussoni, Lang, Livesley, & Macbeth, 2000; Donnellan, Burt, Levendosky, & Klump, 2008). Because neuroticism and attachment anxiety share some overlap (e.g., Noftle & Shaver, 2006), these regions might also be particularly high in attachment anxiety. Thus, we hypothesized that participants high in attachment anxiety would be more likely to reside in Atlantic and Northeastern states.

Other research on geographic variation suggests that attachment avoidance would also vary in meaningful ways within the US. For example, Kitayama and colleagues (2010) suggest that individuals in frontier states (i.e., more recently settled states) are more independent and autonomous than individuals living in the Eastern US. These differences might have emerged because settling the frontier initially attracted people who were highly independent and less interconnected and that these traits helped people adapt to new unexplored environments. As time passed, frontier states developed institutions and practices that reified these differences and socialized future generations. As such, individuals on the frontier tend to derive happiness more from personal accomplishments, make more dispositional attributions, live in sparsely populated regions, and even name their children more esoteric names (Kitayama et al., 2010; Kitayama, Ishii, Imada, Takemura, & Ramaswamy, 2006; Uskul, Kitayama, & Nisbett, 2008; Varnum & Kitayama, 2011). Frontier states also have a greater percentage of people living alone, greater percentage of households without grandchildren, and a greater percentage of people who are self-employed (Vandello & Cohen, 1999). Likewise, the harsh and dangerous conditions of the early frontier may have put ecological pressures on individuals to adopt strategies geared toward short-term relationships and superficial bonds, a staple of ecological theories of the transmission of attachment behavior (Belsky, Steinberg, & Draper, 1991; Chisholm, 1993). In sum, relative to other regions, individuals in the frontier have fewer social connections and stress independence and autonomy. Similarly, avoidant individuals are often characterized as excessively self-reliant and also prefer isolated activities (Brennan, Clark, & Shaver, 1998; Ein-Dor, Mikulincer, Doron, & Shaver, 2010; Ein-Dor, Reizer, Shaver, & Dotan, 2012). Through intergenerational transmission and social contagion, the harshness of the early frontier region could lead to higher rates of avoidant attachment in the western U.S. (Belsky et al., 1991; Chopik et al., 2014; Chopik, Moors, & Edelstein, 2014; Fonagy, Steele, & Steele, 1991; Fowler & Christakis, 2008). Further, the quality of close relationships is often considered a proxy for environmental threat and stress—providing a functional explanation for the development of attachment insecurity in these harsh environments (Belsky et al., 1991; Simpson & Belsky, 2008). Altogether, historical differences in settlers of the frontier, environmental conditions of the frontier, and the processes of intergenerational transmission and social contagion would suggest that individuals living in these regions may have more stand-offish, independent personalities. Thus, we hypothesized that participants high in attachment avoidance would be more likely to reside in frontier (i.e., western) states.

Variation in adult attachment orientation should also be related to regional indicators of relational behavior. For example, avoidant individuals tend to have smaller social networks (Fiori, Consedine, & Merz, 2011), suggesting that they might be more likely to live alone or live in smaller households on average. Further, avoidant individuals are less likely to engage in committed relationships, preferring more casual, distant relationships (Schindler, Fagundes, & Murdock, 2010). Among those *in* relationships, avoidance predicts higher dissolution rates over a four-year period (Kirkpatrick & Hazan, 1994). These relationship dynamics suggest that states with a high number of avoidant individuals may also have a lower percentage of married adults. Avoidant adults also tend to volunteer and offer help to others at lower rates than non-avoidant adults (Gillath et al., 2005). As such, we expected that states with a larger number of avoidant individuals would report lower volunteering rate and fewer hours volunteering. Finally, given the associations between adult attachment and health (Pietromonaco, Uchino, & Dunkel Schetter, 2013) and well-being (Wei, Liao, Ku, & Shaffer, 2011), we hypothesized that higher state-level anxiety and avoidance would be associated with higher mortality rates and lower well-being.

2. Method

2.1. Participants and procedure

Participants were 127,070 adult users (Mdn_{age} = 25–34 years old; 73.5% female) from an Internet site (authentichappiness.com) who completed a measure of attachment between September 2002 and March 2012. The current sample was part of a larger project on the comparison of age differences in attachment orientations across cultures (Chopik & Edelstein, 2014). The majority of the sample (71.7%) had at least a bachelor's degree. Information on ethnicity, sexual orientation, and respondent-level relationship status was unavailable. Participants who registered on the website provided demographic information, including their postal zip codes, which were used to identify the states in which respondents lived. All available data were used, so no stopping rule was implemented and there were no data exclusions. Additional measures on several positive psychology constructs (e.g., subjective well-being, character strengths) were available but the current authors did not have access to these data. Although our large sample of participants allowed for more precise estimates of state-level means, ultimately our analysis was done on these fifty observations, as in previous work on national differences in psychological characteristics (Rentfrow, 2010; Rentfrow et al., 2008). This limits our ability to statistically detect small effects. Thus, studies of geographic variation should be interpreted in light of the number of observations used in the focal analysis, rather than the number of observations used to yield aggregate scores for an area. We note this as a limitation of the current study and recommend replication of the following associations in different samples and at different units of analysis, which have the potential to increase the confidence of our findings.