

## Perceived Dominance in Young Heterosexual Couples in Relation to Sex, Context, and Frequency of Arguing

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This study used a theoretical framework derived from evolutionary biology and animal research to investigate dominance in heterosexual couples of young adults. We operationalized dominance as decision-making power and hypothesized that there would be agreement within couples as to who is dominant and who is subordinate, and that dominance would be consistent across different contexts. We also investigated variation in the sex of the dominant individual and in the strength of dominance across couples. Study participants were 140 young men and women (including 19 heterosexual couples in which both partners were tested), most of whom were college students. Overall couple dominance and dominance strength were assessed with a single-item self-report questionnaire. An additional 40-item questionnaire was used to investigate dominance and amount of arguing in different aspects of romantic relationships. Among the 19 couples, there was a significant agreement in the assessment of dominance between partners. Furthermore, among all study participants, assessments of couple dominance were consistent with perceived asymmetries in decision-making with regard to joint leisure activities, couple intimacy, and division of roles. Couples without clear dominance (egalitarian) generally argued less often than couples with strong or weak dominance. Men were more likely to be dominant than women. Overall, the principles underlying dominance in human heterosexual couples appear to be similar to those operating in nonhuman primates. Evolutionary and comparative theories of dominance could provide a valid framework for future studies of human couple dominance, in which both physiological and fitness correlates of dominance and subordination could be investigated.

*Keywords:* couple dominance, game theory, humans, primates, romantic relationships

Conflict over resources or disagreement about a course of action can emerge in any social interactions between two individuals, regardless of whether they belong to the same or different species, and whether they interact only once in their lifetime or have a long-term relationship that encompasses many repeated interactions. Evolutionary game theorists have used

the HAWK-DOVE model to examine under what circumstances an individual escalates a fight or threatens to do so (HAWK) versus withdraws and communicates the willingness to let the other win the contest (DOVE; Smith & Price, 1973; Hardy & Briffa, 2013). Resolving all contests through fighting (HAWK-HAWK) or negotiation (DOVE-DOVE) can be ineffective or extremely costly to both individuals. Contest resolution through dominance, instead, in which one individual threatens and the other withdraws (HAWK-DOVE), is highly effective and can reduce costs to both individuals (although the benefits are greater for the dominant than for the subordinate). Contest outcomes and dominance and submission in dyadic interactions are generally determined by differences in resource-holding-potential (RHP; e.g., size or strength) between the two individuals or any other asymmetries between them (e.g., in the value of the resource being contested and there-

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fore in the motivation to obtain it) that potentially bias the confrontation in favor of one individual and against the other (Hammerstein, 1981; Hardy & Briffa, 2013).

Contest resolution through dominance plays a particularly prominent role in species in which competition between conspecifics is intense but long-term social bonds with others are crucial for survival or reproductive success (e.g., bonds between parents and offspring or other relatives, or between alliance partners, or group members; Hardy & Briffa, 2013). Dominance has been well-studied in many species of group-living nonhuman primates; in these primates, stable dyadic dominance relationships between each individual and every other group member result in a dominance hierarchy within the group, with every individual occupying a distinct position, or rank, on this hierarchy (Drews, 1993; Hinde, 1978; Maestriperi, 1996, 2012). Dominance is also a pervasive aspect of all human social relationships (e.g., relationships between relatives and between romantic or business partners; see Maestriperi, 2012), but human research on couple dominance has generally been guided by theories rooted in the social sciences (e.g., “social exchange theory,” Homans, 1958; “equity theory,” Adams, 1965; “resource theory,” Tichenor, 1999; or “dyadic power theory,” Dunbar, 2004) rather than evolutionary theories.

The study of dominance in married or dating couples has been an active area of research in psychology and sociology since the 1950s. Research on this topic, however, has been highly heterogeneous. In some studies, dominance and submission have been considered stable personality traits (e.g., Buss, 1991; Weisfeld et al., 1992), whereas in others dominance has been viewed as a manifestation of an individual’s power in a close relationship (Cromwell & Olson, 1975; Huston, 1983). Power, in turn, has been viewed as a “complex, multidetermined construct” that can be differentiated into power bases (e.g., earning potential or emotional commitment to the relationship), power processes (e.g., the styles of communication and interaction by which partners try to influence one another), and power outcomes (i.e., the end-result, observable measures of the relative balance of power; Cromwell & Olson, 1975; Huston, 1983). Empirical studies of couple power have focused on the earning potential (or emotional commitment) of each partner, or their behav-

ioral interactions in a laboratory setting (e.g., in terms of assertiveness or control of conversation), or self-reported measures of asymmetries in decision-making (see Gray-Little & Burks, 1983, for a comprehensive review of early research).

The concept of “power bases” is roughly equivalent to that of resource-holding potential (i.e., an individual’s size or strength or any other characteristics that increase his or her formidability). Measures of power bases or RHP address the question of why one individual in a dyad may be dominant over the other (e.g., Coughlin & Wade, 2012; Sprecher, 1985), but they do not provide a direct assessment of who is dominant and who is subordinate. The concepts of power processes and power outcomes, if taken together, are equivalent to the concept of dominance used in the animal literature, which is what we use in this manuscript.

Behavioral observations of dyadic interactions in the laboratory and self-report measures of asymmetries in decision-making generally provide consistent information about couple dominance (e.g., Dunbar & Burgoon, 2005; Gray-Little & Burks, 1983). However, whereas in nonhuman primates and other animals behavioral assessment of dyadic dominance can be straightforward (whether it is based on a simple test of priority of access to a resource or an exchange of aggression and submission; Maestriperi, 1996), behavioral assessment of dominance in human couples in the laboratory has been conducted with highly variable procedures (ranging from the analysis of eye contact and nonverbal behavior to that of conversational style or overt verbal aggression toward the partner; e.g., Dunbar & Burgoon, 2005), and no consensus has emerged with regard to the use of a single standardized test or reliable behavioral measures. Previous studies of couple dominance have used either single-item self-report questionnaires through which individuals were directly asked *who has more decisional power in your relationship?* or *who is dominant and who is subordinate?* (e.g., Dunbar & Burgoon, 2005; Felmlee, 1994; Galliher et al., 1999; Neff & Suizzo, 2006; Sprecher & Felmlee, 1997) or multiple-item self-report questionnaires through which partners were asked which member of the pair had more decisional power in a range of different contexts and situations (e.g., Bentley et al., 2007; Brezsnayk & Whisman, 2004; Oy-

amot et al., 2010; Rogers et al., 2005; Weisfeld et al., 1992).

The most consistent findings of research on dominance in married or dating couples are (a) that egalitarian couples tend to have higher marital satisfaction and greater relationship stability than couples in which there is clear dominance, regardless of the sex of the dominant individual; (b) that in couples with clear dominance, men are more likely to be dominant than women; and (c) that in couples with clear dominance marital satisfaction and relationship stability/longevity are higher for couples in which men are dominant when compared to couples in which women are dominant (Bentley et al., 2007; Brzysnyak & Whisman, 2004; Felmlee, 1994; Gray-Little & Burks, 1983; Sprecher, Schmeckle, & Felmlee, 2006; Weisfeld et al., 1992; but see Sprecher & Felmlee, 1997). Interestingly, similar perceptions of couple dominance and similar proportions of egalitarian versus nonegalitarian couples have been reported in studies of adult and adolescent romantic couples (e.g., Bentley et al., 2007; Galliher et al., 1999) as well as in studies of adult couples of different countries or ethnic groups (Neff & Suizzo, 2006; Weisfeld et al., 1992), suggesting that couple dominance is perceived in a similar way regardless of variation in age, or culture/ethnicity.

Relative to our knowledge of dyadic dominance in nonhuman primates and other animals, many aspects of dominance in human couples remain uninvestigated and therefore poorly understood. For example, it is not known whether dominance in couples is context-dependent or independent, and whether there are any differences in relation to context between male-dominated and female-dominated relationships. It also unknown the extent to which dominance is contested (i.e., the two partners struggle for dominance) in couples with strong dominance (large and clear-cut asymmetries in decisional power) relative to couples with weak or no dominance (egalitarian). Although nonhuman primate studies have measured stress hormones in dyads with stable versus unstable dominance and compared cortisol levels in dominants and subordinates (e.g., Sapolsky, 2005), little comparable information exists for human couples (but see Loving et al., 2004; Maestripieri et al., 2013). Finally, it is not clear what are the fitness benefits and costs of being dominant or subor-

dinate in a dyadic relationship (e.g., the extent to which dominance-subordination is associated with survival or reproductive strategies), what trade-offs exist for individuals who accept a subordinate status in their relationships, and under what circumstances changes in benefit-to-cost ratios may lead a subordinate to start a rebellion against a dominant partner or end the relationship. Clearly, using evolutionary principles and comparative data from nonhuman animals to guide human research on couple dominance could elucidate many proximate and functional aspects of this phenomenon and lead to a better understanding of human pair bonds.

This study is part of a larger research project in which we investigate many proximate and functional aspects of dominance in human dating or married couples. In this research, similar to previous studies, we operationalized dominance as a consistent asymmetry in decision-making. The first aim of this study is to assess whether there is agreement within couples as to whether there is a dominant/subordinate differentiation within the couple (as opposed to the relationship being perceived as fully egalitarian) and as to who is dominant and who is subordinate. To achieve this aim we administered a single-item self-report questionnaire about couple dominance to a number of couples. The second aim was to validate this single-item self-report tool for the assessment of couple dominance through the administration of a 40-item questionnaire that asked study participants whether they or their partners have more decisional power in many different domains of their relationships and how much they argue in these domains. Related to this aim, we also tested the hypothesis (derived from nonhuman primate research) that couple dominance is context-independent, as opposed to context-dependent (i.e., one partner has more decisional power in some contexts and the other partner in other contexts). A third aim of this study was to investigate whether males or females were more likely to be dominant in couples, and whether male and female dominance differed in the extent to which they were expressed in different domains of the relationship. Finally, we investigated whether the amount of arguing within couples was associated with the presence or absence of dominance, strong versus weak dominance, and male versus female dominance. We report elsewhere data on salivary cortisol

concentrations in relation to relationship stability/instability and in men and women who are dominant or subordinate in their romantic relationships (Maestriperi et al., 2013).

### Method

Study participants were 73 men and 67 women aged between 18 and 38 years ( $M = 22.72$ ,  $SE = 0.32$ ). Of the 140 study participants, 47% of them were Caucasian, 17% were Hispanic, 19% were Asian, and 17% were African. Approximately 80% of the study participants were undergraduate or graduate students at a private Midwestern university, whereas most of the others were employed by the same university under various capacities. They were recruited through fliers posted on campus, mailing lists, or a human subject recruitment website (Sona System). All study participants completed a written informed consent form before participating in the study and were paid \$20 after completion of the procedures. The use of human subjects was approved by the IRB.

### Surveys and Questionnaires

An initial survey asked information about participants' age, ethnicity, sexual orientation, and relationship status (single or in a relationship). Of the 140 participants, 21 were romantic couples (19 heterosexual and 2 homosexual couples, for a total of  $n = 42$  individuals), 54 were in a relationship with an individual who did not participate in the study, and 44 were singles. One hundred twenty-one participants self-described their sexual orientation as heterosexual, 9 as homosexual, and 10 as bisexual.

Dominance within the couple was assessed with a single-item self-report questionnaire, the Couple Dominance Assessment (CDA), in which study participants were directly asked *In your current romantic relationship, which of you is more dominant?* Participants were told that dominance referred to decision-making power and answers were given on 1–5 scale (1 = *I am definitely dominant to my partner*, 2 = *I am somewhat dominant*, 3 = *neither one of us is dominant*, 4 = *my partner is somewhat dominant*, and 5 = *my partner is definitely dominant*). Single individuals were asked to answer the question with reference to their most recent romantic relationship.

In addition to the CDA, all study participants were also asked to fill out a Couple Dominance Questionnaire (CDQ), a multi-item survey assessing symmetries/asymmetries in decision-making power as well as the level of agreement/disagreement (arguing) between two partners in a current or recently terminated romantic relationship. Specifically, the CDQ consists of 40 items on a 5-point Likert scale, which ask the study participants whether they or their partners have more decisional power about various aspects of their relationships (1 = *we always do as my partner prefers*, 3 = *we sometimes follow my preference/sometimes follow his/hers*, 5 = *we always do as I prefer*). For each of the 40 items, participants also indicate, using a 5-Likert scale how often they and their partner argue about that particular issue (1 = *all the time*, 3 = *sometimes*, 5 = *never*). The complete CDQ is provided in Table 1.

### Data Analyses

We validated the reliability of the CDA using the data for the 19 heterosexual couples participating in the study. Given the dyadic nature of these data, reliability was measured by the level of agreement within the couple using Kenny et al.'s (Kenny, Kashy & Cook, 2006) approach to the measurement of nonindependence in dyads. We used Pearson's product-moment correlation coefficient to evaluate the similarity of each partner's rating of dominance in heterosexual couples. Pearson  $r$  is robust to several violations of parametric statistics, among which the use of categorical data such as single Likert items (Havlicek & Peterson, 1976). We used only the 19 heterosexual couples because ordinary correlational analyses cannot be performed with dyadic data from indistinguishable members such as homosexual romantic couples (Kenny et al., 2006). Given the small sample, we calculated the coefficient intervals of the correlation using nonparametric bootstrap of the Pearson product-moment correlation with 10,000 replicates to obtain the accelerated percentile intervals ( $BC_a$ ).

The CDQ data relative to symmetry/asymmetry in decision-making within the couple were analyzed with factorial analysis with varimax rotation and Kaiser normalization. We used Pearson correlations to assess whether the participants' mean CDA scores were correlated

Table 1  
*CDQ Factors and Loadings*

Factor	Item	Loadings	
Joint activities	1. My partner and I spend money on	0.61	
	3. When we play games	0.54	
	8. When deciding what to eat	0.50	
	11. My partner and I purchase	0.53	
	13. When we watch a TV show or movie	0.70	
	16. When my partner and I go out to eat	0.70	
	18. When my partner and I spend money on something	0.47	
	21. When we listen to music, my partner and I	0.36	
	28. When my partner and I go out	0.72	
	33. My partner and I spend weekends	0.44	
	35. When my partner and I go to events	0.65	
	37. My partner and I do for fun	0.76	
	Level of emotional Intimacy	6. My partner and I share our emotions	0.55
		10. In terms of how serious our relationship is	0.45
17. My partner calls me		0.45	
20. My partner and I discuss our feelings		0.63	
24. My partner and I go out to places		0.40	
25. My partner talks to me		0.57	
27. My partner and I do things together rather than separately		0.56	
32. My partner and I spend time together		0.64	
Physical intimacy and division of Labor	2. In our relationship I pay for things	0.51	
	5. My partner and I hug, kiss, touch	0.46	
	12. My partner and I display affection in public	0.46	
	15. When my partner and I engage in sexual acts, we	0.40	
	23. When we are together, I cook for my partner and me	0.54	
	29. As of now, my future career plans are	0.57	
	30. When we are together, I clean for my partner and me	0.55	
	34. My partner and I have sex	0.37	
Exclusivity of the relationship	9. I spend time with friends	0.40	
	26. I give attention to other men/women	0.54	
	36. I have sex with other men/women	0.53	
	38. I talk about the attractiveness of other men/women	0.45	
	39. I talk to ex-boyfriends/girlfriends/spouses	0.62	
	40. I share information about our relationship with others	0.57	
Items excluded	4. When we spend time with friends, we		
	7. The person who accept blame for an argument is		
	14. My partner meets with my family		
	22. In terms of clothing, my partner wears		
	31. My partner and I complete work together		

with their mean scores in the CDQ factors identified by the factor analysis (a significant negative correlation indicates agreement between the two measures). General lineal models were used to assess how often two partners argued as a function of whether their relationship was perceived to be egalitarian or characterized by strong or weak dominance. General lineal models were also used to assess whether dominance is sex- and context-dependent, namely whether men and women who are dominant in their relationships assert their power in different contexts. *t* tests for unpaired samples were used to

compare the amount of arguing in couples in which men were dominant versus couples in which women were dominant.

All statistical analyses were conducted using SPSS. All tests were 2-tailed and probabilities  $< 0.05$  were considered statistically significant.

## Results

Forty-three of the 140 study participants who answered the CDA reported that they or their partners were definitely dominant in the rela-

tionships (1 or 5 score, strong dominance), 59 of them reported that they or their partners were somewhat dominant (2 or 4 score, weak dominance), and 38 of them reported that neither they nor their partners were dominant (score 3, egalitarian).

Among the 19 heterosexual couples tested in the study, there was a significant correlation in the CDA ratings between partners ( $r = -0.61$ ,  $p < .01$ ; 95% CI [-0.85, -0.26]; Figure 1). Therefore, there was significant agreement between partners as to whether or not one partner was dominant over the other, and which partner was dominant. In these 19 couples, men ( $M = 2.47$ ,  $SD = 1.02$ ) were significantly more likely to be dominant than women ( $M = 3.42$ ;  $SD = 0.83$ ;  $t = -2.45$ ,  $df = 18$ ,  $p < .05$ ). The same sex difference in dominance was obtained by considering all study participants for whom the CDA data were available (males,  $M = 2.52$ ,  $SD = 1.22$ ; females,  $M = 3.08$ ,  $SD = 1.21$ ;  $t = -2.58$ ,  $df = 124$ ,  $p = .01$ ; homosexual participants were excluded from this analysis).

CDQ questionnaire data were available for 134 of the 140 study participants. A factor analysis of the dominance component of the CDQ (i.e., symmetry/asymmetry in decision-making power within the couple) with Varimax rotation and Kaiser normalization identified four factors, which encompassed 35 of the 40 items. The first factor was composed of 12 items (items 1, 3, 8, 11, 13, 16, 18, 21, 28, 33, 35, 37; these items mainly related to joint leisure activities;  $\alpha = .83$ ), the second factor had 8 items (items 6, 10, 17, 20, 24, 25, 27, 32; these items were related to the level of emotional intimacy of the relationship;  $\alpha = .72$ ),

and the third factor was composed of 8 items (items 5, 2, 12, 15, 23, 29, 30, 34; these items addressed both issues of physical intimacy and of division of roles;  $\alpha = .70$ ). The fourth factor included 6 items (9, 26, 36, 38, 39, 40) concerning the exclusivity of the relationship relative to other individuals (e.g., friends, former romantic partners, potential rivals;  $\alpha = .61$ ). These four factors had high internal consistency also in terms of how much the couple argued (factor 1  $\alpha = .88$ ; factor 2  $\alpha = .82$ ; factor 3  $\alpha = .80$ ; factor 4  $\alpha = .79$ ). For the purposes of data analysis, we calculated the means of the items grouped in each factor, both for the symmetry/asymmetry in decision-making and for the argument components of the CDQ. Of the five items not selected by the factor analysis we analyzed the item measuring which partner takes the blame for couple conflicts (item 7: 1 = *always my partner*, 5 = *always me*), as it may reflect an important aspect of dominance or submission. For the other 4 items (4, 14, 22, 31) not included in the four factors identified by the factor analysis, see Table 1.

Bivariate correlations between the CDQ four dominance factors and the CDA scores are presented in Table 2. Pearson correlations were negative (which indicates agreement between the two measures) and statistically significant for Factor 1 ( $r = -.28$ ,  $n = 134$ ,  $p < .01$ ), Factor 2 ( $r = -.33$ ,  $n = 134$ ,  $p < .01$ ), and Factor 3 ( $r = -.36$ ,  $n = 134$ ,  $p < .01$ ), but not for Factor 4 ( $r = -.04$ ,  $n = 134$ ,  $p > .10$ ). Furthermore, the CDA scores were also significantly positively correlated with the CDQ item for taking blame ( $r = .20$ ,  $n = 134$ ,  $p = .01$ ), indicating that subordinate partner within the couple accepted the blame more frequently. Taken together, these results indicate that with the exception of issues of relationship exclusivity and the four items excluded by the factor analysis, the assessment of couple dominance with the CDA reliably reflected asymmetries in decision-making power in many aspects of the relationship.

To assess the extent to which dominance within the couple was associated with how often the two partners argued, we categorized relationships as being strong in dominance if study participants reported a 1 or a 5 CDA score, weak in dominance if they reported a 2 or 4 CDA score, and egalitarian if they reported a 3 CDA score. Four general linear models, one for each CDQ factor, were then tested with relationship dominance as the categorical variable

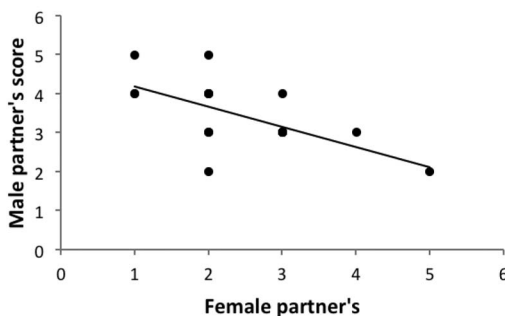


Figure 1. Correlation between male and female partner's Couple Dominance Assessment (CDA) scores in 19 couples, indicating agreement about who is dominant and who is subordinate in the relationship.

Table 2  
Correlations Between the Scores of the CDA and the Scores of the Four CDQ Factors Representing Dominance in Decision Making

Factor	CDA	Factor 1	Factor 2	Factor 3	Factor 4	Item 7
CDA	1.00					
Factor 1	-0.28**	1.00				
Factor 2	-0.32**	0.37**	1.00			
Factor 3	-0.36**	0.31**	0.31**	1.00		
Factor 4	-0.04	0.08	0.07	0.07	1.00	
Item 7	0.20*	-0.30**	-0.30**	-0.20*	-0.12	1.00

\*  $p < .05$ . \*\*  $p < .01$ .

and level of argument as the dependent variable. Results are presented in Figure 2. We found a significant result for Factor 1 ( $F_{2,131} = 5.93$ ,  $p < .01$ ,  $\eta^2 = 0.08$ ), indicating that egalitarian couples argued less frequently about joint leisure activities than couples characterized by strong and weak dominance (Tukey HSD post hoc tests  $p < .01$  and  $p < .01$ , respectively). The results for level of emotional intimacy (Factor 2) and physical intimacy and division of labor (Factor 3) were in the same direction but showed only a trend toward statistical significance (Factor 2:  $F_{2,131} = 2.85$ ,  $p = .06$ ,  $\eta^2 = 0.04$ ; Factor 3:  $F_{2,131} = 2.60$ ,  $p = .07$ ,  $\eta^2 = 0.04$ ). In both cases, egalitarian couples tended to argue less than couples with strong dominance (Factor 2, Tukey HSD post hoc tests  $p = .06$ ; Factor 3: Tukey HSD post hoc tests  $p = .07$ ). No significant association between rela-

tionship dominance and level of arguing was found for Factor 4.

To investigate the relationship between the dominant sex in a couple and context, we defined a couple as male-dominated if a male participant reported a 1 or 2 CDA score, or a female participant reported a 4 or 5 CDA score. Likewise, a couple was defined as female-dominated if a woman had a 1 or 2 CDA score or a man had a 4 or 5 CDA score. Data for participants who perceived their relationship to be egalitarian (CDA score 3) were excluded from this analysis. A general linear model for repeated measures with the Greenhouse-Geisser correction for the violation of sphericity revealed a significant interaction between sex of the dominant individual and CDQ factor ( $F_{2,4,233} = 2.93$ ,  $p = .04$ ,  $\eta^2 = 0.03$ ). Specifically, dominant men asserted their power in the context of exclusivity of the relationship (Factor 4) significantly more than dominant women did (Men:  $M = 3.75$ ,  $SE = 0.10$ ; Women:  $M = 3.40$ ,  $SE = 0.08$ ;  $t = -2.60$ ,  $df = 96$ ,  $p = .01$ ). There were no differences between dominant men and dominant women in the other 3 factors.

Finally, there were no significant differences in the amount of arguing between male-dominated and female-dominated couples in any of the four factors identified by the factor analysis (Factor 1,  $t = 0.245$ ,  $df = 96$ ,  $p > .1$ ; Factor 2,  $t = 0.029$ ,  $df = 96$ ,  $p > .1$ ; Factor 3,  $t = 0.842$ ,  $df = 96$ ,  $p > .1$ ; Factor 4,  $t = -0.21$ ,  $df = 96$ ,  $p > .1$ ; see Figure 3).

## Discussion

Previous studies of dominance in human romantic couples were informed and guided by

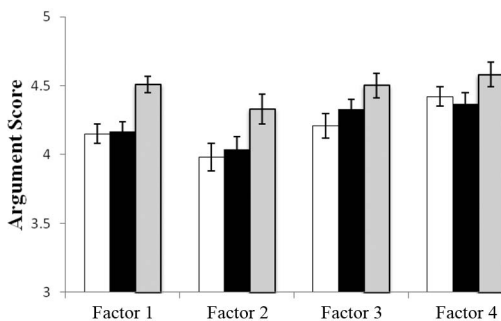


Figure 2. Mean ( $\pm SE$ ) Couple Dominance Questionnaire (CDQ) argument scores in couples characterized by strong dominance (white bar), weak dominance (black bar), and egalitarianism (gray bar). Higher scores indicate lower level of argument. Factor 1 = Joint leisure activities; Factor 2 = Emotional intimacy; Factor 3 = Physical intimacy and division of labor; Factor 4 = Exclusivity of the relationship.

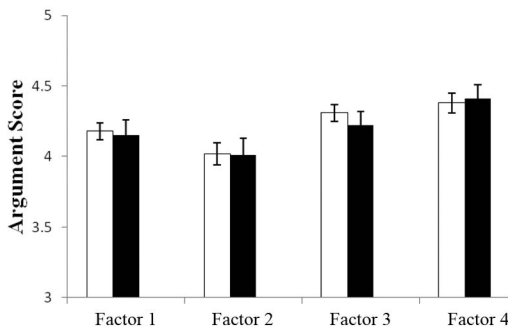


Figure 3. Mean ( $\pm$ SE) Couple Dominance Questionnaire (CDQ) argument scores in couples with a dominant man (white bar) and a dominant woman (black bar). Higher scores indicate lower level of argument. Factor 1 = Joint leisure activities; Factor 2 = Emotional intimacy; Factor 3 = Physical intimacy and division of labor; Factor 4 = Exclusivity of the relationship.

theories developed in the social sciences. In this study, we aimed to complement and integrate these theories with theories and approaches imported from evolutionary biology and comparative research on dominance in nonhuman primates. Accordingly, we focused on the concept of couple dominance rather than on power constructs and made the assumption that, similar to what occurs in many nonhuman primate species (e.g., Maestriperi, 2012), couple dominance is likely to be domain-independent rather than domain-specific. In addition to the goal of importing biological theories of dominance into the study of human couple dominance, we also aimed to develop and validate a simple self-report tool for the assessment of couple dominance as well as to show that empirical data on dominance obtained with this tool are comparable to those of previous studies.

We operationalized couple dominance as a perceived asymmetry in decision-making within the couple. Using a direct single-item self-report measure of dominance (the CDA), we showed that among different couples asymmetries in decision-making are perceived to be clear and consistent (couples with strong dominance), or weak and somewhat inconsistent (couples with weak dominance), or altogether absent (egalitarian couples). We also demonstrated that the CDA was reliable by reporting that among the 19 heterosexual couples in our study there was significant agreement between the two partners as to whether one of them was

dominant over the other and who was the dominant partner. The two partners were tested simultaneously in different rooms so their agreement was not the result of communication between them.

In addition to providing a direct assessment of couple dominance, 134 participants also answered a 40-item self-report questionnaire (the CDQ) that probed asymmetries in decision-making and amount of arguing in various aspects of their relationships. A factor analysis of the dominance component of the CDQ identified four factors, which we labeled *joint leisure activities*, *emotional intimacy*, *physical intimacy and division of roles*, and *exclusivity of the relationship*. These four factors had high internal consistency both for asymmetries in decision-making and for level of arguing. The CDA scores were significantly correlated with the mean CDQ scores for factors 1, 2, and 3 but the correlation was not significant for factor 4. The CDA scores were also significantly correlated with the scores on an additional CDQ item, which did not load onto any of the four factors identified by the factor analysis, and which assessed the extent to which an individual assigned blame for an argument to his or her partner. Thus, perceived dominance within the couple assessed with the CDA accurately reflected perceived asymmetries in decision-making in the contexts of joint leisure activities, emotional intimacy, physical intimacy and division of roles, and assigning blame to one's partner.

Although self-report measures are inevitably influenced by subjective biases, in the case of couple dominance assessment it may be argued that self-report measures are more likely to capture stable features of the dynamic of interaction between partners than brief observations of behavior conducted in an artificial laboratory environment. The use of observational behavioral measures to assess dominance is also complicated by the fact that men and women generally use different competitive or aggressive strategies when arguing (e.g., Campbell, 1999). This has made it difficult to establish standard experimental procedures for assessing couple dominance with behavioral observations or tests in the laboratory. Although it may be useful to complement self-report measures with behavioral observations whenever possible, this and other previous studies have shown that even a simple



and direct self-report assessment of dominance is reliable and valid.

In this study, approximately 75% of the 140 young men and women who completed the CDA reported that they or their partners were dominant in their current or most recent romantic relationships, whereas approximately 25% of them reported that neither partner was dominant (i.e., the relationship was egalitarian). In previous studies using similar methods for assessing couple dominance, the proportion of individuals who reported being in egalitarian relationships varied in relation to the age of the individuals. For example, [Sprecher and Felmlee \(1997\)](#) reported that in a subject population with a mean age of 20 years approximately 30% of individuals reported being in egalitarian relationships, which is comparable with what we found in our study (see also [Felmlee, 1994](#); [Gray-Little & Burks, 1983](#); [Neff & Suizzo, 2006](#)). Clear-cut dominance is generally more evident in older married couples than in younger dating couples (e.g., [Gray-Little & Burks, 1983](#)); among late adolescents, perception of egalitarianism in the relationship can be as high as 70% (e.g., [Gallagher et al., 1999](#)). There is a strong consistency among studies about the sex of the individual perceived to be dominant, regardless of age. In our study, men were significantly more likely to be perceived as dominant (by themselves and their female partners) than females; the same finding has been consistently shown before, although some previous studies have suggested that men sometimes overestimate the extent of their dominance when compared with women ([Bentley et al., 2007](#); [Breznyak & Whisman, 2004](#); [Felmlee, 1994](#); [Gray-Little & Burks, 1983](#); [Sprecher & Felmlee, 1997](#); [Weisfeld et al., 1992](#)). Understanding why more couples report having male dominance than female dominance is beyond the scope of this study; our interest here is simply to show that using a new approach to assess couple dominance we obtain a pattern of results consistent with those of previous studies.

Many previous studies of couple dominance reported that marital satisfaction and relationship stability/longevity were higher in egalitarian couples or in male-dominated couples than in female-dominated couples (e.g., [Bentley et al., 2007](#); [Gray-Little & Burks, 1983](#); [Felmlee, 1994](#); [Sprecher et al., 2006](#); [Weisfeld et al., 1992](#)). Our study did not include self-report

measures of marital satisfaction or objective measures of relationship stability or longevity. We did find, however, that individuals who perceived to be in egalitarian relationships argued significantly less about decisions concerning joint leisure activities than individuals in relationships with strong or weak dominance. Less arguing may not necessarily translate into greater marital satisfaction or greater relationship stability. Our result, however, is consistent with the notion that couples without a clear dominance relationship are generally not couples in which the two partners are fighting for dominance and the outcome is unclear, but couples who generally fight less and share decision-making more than couples in which there is a dominant and a subordinate partner. Our results also suggest that the presence of strong dominance in a relationship does not necessarily reduce the amount of arguing between partners and that the sex of the dominant individual does not affect the amount of arguing between partners. Thus, couples in which women were dominant did not argue more than couples in which men were dominant, as was suggested by some previous research.

In our study, relationship exclusivity was the only relationship domain in which dominance showed a sex difference. Men who were dominant in their relationship were perceived to have significantly more decision-making in this context than women who were dominant. The weakness of the association between female dominance and decision-making regarding relationship exclusivity may have been responsible for the overall lack of a significant correlation between the CDA scores and the CDQ factor for relationship exclusivity. Previous studies have reported that male sexual jealousy is more about their female partner's behavior (e.g., about whether they interact with male friends), whereas female sexual jealousy is more about their male partner's romantic feelings and emotional commitment (e.g., [Buss, Larsen, Westen, & Semmelroth, 1992](#)). Because the items that loaded onto the relationship exclusivity factor mainly involved decision-making about behavior (issues of emotional and physical intimacy loaded onto the second and third factor, respectively), this may explain why dominant men were perceived to assert their dominance in this domain more than dominant women did. We did not find a significant difference between

male-dominated and female-dominated couples with regard to the emotional intimacy factor, although it may be argued that the hypothesis of sex differences in jealousy by Buss et al. (1992) would have predicted that there should be more arguing over emotional intimacy in couples in which women are dominant. None of the questionnaire items loaded onto the second factor, however, explicitly addresses jealousy issues, but only the level of emotional intimacy with which each partner is comfortable. Nevertheless, the relationship between couple dominance and sex differences in jealousy is interesting and should be further investigated, but it would be important to have data not only on the general amount of arguing within couples, but also on the frequency of arguments initiated by men and women.

With the exception of the relationship exclusivity domain, the results of our study show that couple dominance is generally consistent across domains and also across sexes; the same is true also for many species of nonhuman primates in which dyadic dominance has been studied in detail (e.g., cercopithecine monkeys). In these primates, a dominance relationship between two individuals is generally context-independent and applies to all social interactions between them; and whether a male is dominant over a female or a female is dominant over a male, the contexts in which dominance is expressed are generally similar (Maestriperi, 1996). The best-known examples of context-specific dominance in animals involve highly territorial species, in which dominance between two individuals with different territories depends on whether the two individuals interact in one's or in the other's territory (Maestriperi, 2012). Possible examples of sex and context-specific dominance are provided by species in which females become temporarily dominant over males when they are lactating and are near their infants or near the food sources they need to support their infants (Maestriperi, 2012). Neither territorialism nor reproduction-related access to resources, however, are likely to result in context- or sex-dependent differences in dominance in human romantic relationships.

Regardless of the proximate mechanisms that regulate the formation and maintenance of human romantic and marital relationships (e.g., sexual attraction, romantic feelings, or psychological dependence), these relationships are

good examples of long-term cooperative relationships in which two individuals join forces to accomplish common goals (e.g., reproduction and child rearing, or accumulation of resources). Although there is no doubt that some couples are much more well-matched than others (e.g., in physical attractiveness, age, personality, or ability to acquire resources), the overlap of interests between two partners is never complete and competition is an inevitable component of any long-term cooperative relationships. As a result, disagreements about activities or management of resources are bound to occur, especially for cohabiting couples that share all of their resources, and have joint investments in children. Evolutionary theory suggests that egalitarianism in dyadic cooperative relationships is not an evolutionary stable strategy and that resolving conflicts of interests through continuous fighting or negotiation is ineffective and costly (Hardy & Briffa, 2013). Therefore, the establishment of dominance between partners (i.e., the formalization of asymmetries in decision-making power between them) is likely adaptive and to be expected in all long-term romantic relationships. In this view, it is possible that perceived egalitarianism is a characteristic of early stages of relationships, when conflicts of interests between partners have not yet emerged or are not strong, and especially between younger people who may not live together and do not share their resources or have joint investments the way older couples do. The proportion of couples who report being in egalitarian relationships should gradually decrease and eventually disappear, as the age of the partners and/or the length of the relationship increases. This is a prediction that should be tested by future research on dominance in human romantic relationships.

Future research in this area should also attempt to explicitly measure the fitness benefits and costs of being dominant or subordinate in a romantic relationship. Some of these benefits and costs may include, for example, greater opportunities for extrapair sexual activity and mating success (for a dominant) or loss of such sexual and mating opportunities (for a subordinate), unequal investment in child rearing, or unequal investment of joint resources in other relatives (e.g., a dominant partner may have the power to channel more of the couple's joint resources to his or her relatives—such as broth-

ers and sisters or nieces and nephews—when compared to a subordinate). In long-term monogamous relationships, the fitness of an individual may be intertwined with their partner's fitness. Therefore, future studies should also examine and compare the fitness of individuals in egalitarian couples versus those in couples with weak or strong dominance. Elucidating the dynamics of couple dominance in romantic relationships from both a proximate and an evolutionary perspective, through the integration of concepts and methods from psychology, biology, and other disciplines, could shed new light on the evolution of human pair-bonding and the factors that make it a successful social and reproductive arrangement in many contemporary human societies.

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