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Peak of Desire:

Activating the Mating Goal Changes Life-Stage Preferences Across Living Kinds

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Abstract

In three studies, we explore the existence of an evolved *sensitivity to the peak* as consistent with the evolutionary origins of many of our basic preferences. Activating the evolved motive of mating activates related adaptive mechanisms, including a general sensitivity to cues of growth and decay associated with determining mate value in human courtship. We establish that priming the mating goal also activates as well an evaluative bias that influences how people evaluate cues of growth. Specifically, living kinds that are immature or past their prime are devalued, whereas living kinds at their peak become increasingly valued. Study 1 establishes this goal-driven effect for human stimuli indirectly related to the mating goal. Studies 2 and 3 establish that the evaluative bias produced by the active mating goal extends to living kinds but not artifacts.

My love is like a red, red rose

That's newly sprung in June

--Robert Burns

As celebrated in love poems of yore, likening a person to a flower in bloom is a familiar and well-received compliment. But why, in both poetry and everyday language, do we invite this comparison between attractive people and a flower at its fullest blossom? We suggest here that the fascination with the 'peak stage' of a living kind is a by-product of a deeply-rooted, evolved mating motive: because human mate value is based in part on the age of a potential mate, *sensitivity to the peak* is paramount.

Where Do Preferences Come From?

The existence of an evolved sensitivity to the peak is consistent with the hypothesized origins of many of our basic preferences. In line with the functional approach to attitudes and their formation (Katz, 1960), we consider the adaptive nature of our preferences. In general, preferences across all species are a function of adaptation, such that in large part our presentday likes and dislikes are built upon those that served functional ends for us, particularly long ago in our evolutionary past (Campbell, 1974). Thus we are predisposed to prefer those stimuli that tend to facilitate our goal pursuits and otherwise produce adaptive outcomes (e.g., Cosmides & Tooby, 1992; Neuberg, Kenrick, Maner, & Schaller, 2004). These evolved predispositions serve as 'shortcut processes' and spare each of us from having to figure out each and every time which things are good and helpful and which things are dangerous and unhelpful (Campbell, 1974).

The human preferences of today are influenced by evolved evaluative mechanisms that had been associated with greater survival success in ancestral environments. For instance, people exhibit chronic sensitivity to cues of physical danger that their ancestors encountered, such as snakes and spiders, but lack an innate fear of greater, modern dangers such as firearms and automobiles (Ohman & Mineka, 2001). This state of perceptual readiness and functional preference is thought to facilitate an organism's survival during critical situations (Dijksterhuis & Aarts, 2003).

Functional perceptual readinesses include the specialization of neural systems for processing domain-specific information (e.g., tools and animals; for review see Caramazza & Mahon, 2003). One important domain of information is that of living organisms (versus nonliving objects) with recent research indicating that humans have evolved a core mental module specialized for interacting with living kinds (e.g., Medin & Atran, 2004). For example, it is easier for young children to learn that plants and animals (but not artifacts) receive sustenance from the environment that helps them grow (Inagaki & Hatano, 2003), and changes to living things within briefly presented naturalistic scenes tend to be noticed whereas changes to artifacts are not (New, Cosmides, & Tooby, 2007).

The present research focuses on another facet of evolved perceptual readinesses towards living kinds, namely the functionality of an evolved sensitivity to a living kind's agerelated 'peak'. We conceptualize the peak as the apex in the lifespan development of an organism as perceived by a human being — the ripe fruit, the strong and healthy animal, the newly-blossomed flower - loosely identifiable in many living kinds as the life-stage following adolescence and prior to senescence.

The 'shortcut process' of being sensitive to the peak of a living kind would be facilitative of the successful pursuit of several basic evolutionary goals. For instance, being able to recognize the state of an unripe or a rotten fruit is advantageous for a creature who desires to eat. Discrimination of whether a competitor is at its peak stage (or, which one among several competitors is relatively closest to its peak) would be beneficial for the decision whether to compete or to protect oneself against the threat; likewise, being able to discern immature and past-prime (and therefore most vulnerable) prey would be advantageous for predators on the hunt (Kunkel, Ruth, Pletscher, & Hornocker, 1999).

Research suggests that a sensitivity to the peak is particularly functional for human mate selection. Relative position in the lifespan, as it is strongly related to fertility, is a very important evaluative feature for people's evolved mating preferences (Kenrick & Keefe, 1992). Natural selection has linked sexual attraction with signs of nubility, such that peak mate value is favored and signs of prematurity or advancing age are associated with decreased mate value (Kenrick, Gabrielidis, Keefe, & Cornelius, 1996; Kenrick & Keefe, 1992; Symons, 1995). Because physical attractiveness is associated with good genes and physical health (Gangestad & Simpson, 2000), markers of physical attractiveness—including age, skin color, unblemished skin, and symmetry (Symons, 1995)—may also serve as heuristic cues for providing information about the value of living kinds in general.

Our research focuses on the mating goal in particular as one of the ways through which evolved shortcut processes affect present day evaluations of living kinds. We hypothesize that activating the evolved motive of mating (i.e., reproduction) should activate related adaptive mechanisms, including a general sensitivity to cues of growth and decay. Specifically, we predict that under the influence of the mating goal, people will (a) devalue non-peak stages of living kinds, while (b) maintaining and even increasing their positivity towards the peak stage.

Previous research supports our hypothesis that activation of the mating goal will activate functional preferences. Mating goals can be activated nonconsciously (e.g., through priming manipulations; see Bargh & Chartrand, 2000) to drive the selective processing of social information (Neuberg et al., 2004), and activate perceptions, cognitions, and behaviors thought to facilitate reproductive success (Griskevicius, Cialdini, & Kenrick, 2006; Griskevicius, Goldstein, Mortensen, Cialdini, & Kenrick, 2006; Maner, Kenrick, Becker, Robertson, Hofer, Neuberg, Delton, Butner, & Schaller, 2005; Roney, 2003). For instance, males who view a movie about two people on a date are subsequently more likely to project the emotion of arousal onto the faces of attractive women, but not onto women of average attractiveness (Maner et al., 2005).

It remains to be demonstrated whether the incidental activation of innate mating goals does indeed influence people's sensitivity for the peak of non-incentive stimuli (mating-unrelated interpersonal evaluations and non-sexual objects)—a finding which would illuminate several important psychological phenomena, including the domain extension of traditionally-defined 'goal applicable' stimuli (Higgins, 1996), the nature of evolved motives and functional preferences, and how people understand and evaluate living kinds.

Recent research suggests that goals, once active, operate autonomously in an open-ended fashion on any and all relevant information in the environment, even that which was not the original intended focus of the goal pursuit (Bargh, Green, & Fitzsimons, in press; Bargh & Huang, in press). For example, the conscious goal of evaluating someone for a particular job opening also influences evaluations of incidental others encountered at the same time.

Therefore, if the mating goal activates (as a necessary "means" or component sub-process; see Kruglanski et al., 2002; McCulloch, Ferguson, Kawada, & Bargh, in press) a sub-goal or module specializing in detecting, through directed perceptual and attentional sensitivity, the life-span peak of the living kind under scrutiny, then the active mating goal could affect evaluation of all living kinds, not just potential mates.

To investigate this issue, we examined whether the mating goal activates general preferences for living kinds at the peak of their life spans. We predicted that when this goal is active, living kinds that are immature or past their prime will be relatively devalued, while living kinds at their peak will be relatively more positively valued. In three studies, activation of the mating goal was manipulated, and its effects on evaluations of living kinds at various stages in their life spans were observed.

This design allowed us to examine our predicted effects at specific stages of a living kind's life. Study 1 examined the effects of the active mating goal on the evaluation of fellow humans in domains unrelated to the mating goal. Study 2 extended the mating-related evaluative bias to a non-human, asexual object (fruit). Study 3 compared the active mating goal's effects on evaluations of organic (flower) versus inorganic objects (car).

Study 1

Fifty-five undergraduate students (34 female) agreed to participate in the study in exchange for candy. They ranged from 18 to 58 years of age, with a mean age of 22.13 ($SD=6.86$). One half of participants were randomly assigned to the mating goal condition. We adapted the mating goal prime from Maner et al. (2005). Specifically, participants read a 184-word passage describing a romantic date adapted from the book *See Jane Date* (Senate, 2001). The other half of participants were assigned to the neutral condition, and read a passage describing the interior of a building.

After reading one of these passages, participants were informed that they would be reading a quote from a movie director about the actress Jane Withers, and reviewing photographs of her in famous movies filmed across her acting career. Participants were then asked how likely the following comment referenced her at each stage of her career: “She effortlessly lit up the screen with her performance. This was recognized in the positive reviews of the movie, and specific mentions of her appeal.”

Below this quote were four black-and-white photographs of the actress at different stages of her acting career (presented from left to right: toddler, teen, young adult, older adult). Below each photograph, participants indicated on a 10-point scale (1 = *Not at all likely*; 10 = *Extremely likely*) the likelihood that the flattering quote referred to her at that particular stage of her career. Afterwards, participants were probed for suspicion of the hypothesis using the funneled debriefing technique (Bargh & Chartrand, 2000).¹

Results

We conducted a 2 (priming: mating goal, neutral) $\times$ 4 (life-stage: toddler, teen, young adult, elderly adult) mixed-model analysis of variance (ANOVA), where Priming was a between-subjects and Life-stage a within-subjects factor. Consistent with the hypothesis, the analysis revealed a significant Priming $\times$ Life-stage interaction, $F(3, 159) = 3.15, p < .05, \eta_p^2 = .06$. Figure 1 shows, as predicted, the devaluation of non-peak stages in the mating condition relative to the neutral condition. Participants in the mating goal condition rated a greater difference in likelihood that the flattering quote referred to the actress in her toddler versus teen stage, compared to participants in the neutral condition, $F(1, 159) = 9.15, p < .005, \eta_p^2 = .15$. Further, goal-driven devaluation occurred in both non-peak stages. Participants who were primed with the mating goal rated the quote as significantly less likely to refer to the actress in her toddler stage ($M = 3.37, SD = 2.24$) compared to participants in the neutral condition ($M = 5.18, SD = 2.67$), $t(53) = 2.72, p < .01, p_{rep} = .95, d = .74$.²

The pattern of results indicates that when evaluating a movie actress across her life-long career, participants with an active mating goal were influenced by life stage to a greater extent than were control-group participants.

Study 2

Study 1 provided initial support for the hypothesized general effect of active mating goals on preferences, by examining evaluations of a fellow human in a domain unrelated to mating. Studies 2 and 3 sought to extend the evaluative “preference for the peak” effect to non-human and non-incentive living kinds. In Study 2, we hypothesized that participants primed with a mating goal would evaluate any living kind (e.g., a piece of fruit) as a function of the current stage of its life trajectory.

Thirty-four participants (28 female) recruited from a public forum internet website agreed to complete the study in exchange for the chance to win a \$50 lottery. They ranged from 18 to 63 years of age, with a mean age of 32.73 ($SD=12.12$). Similar to Study 1, one half of participants were randomly assigned to the mating goal condition and read the same mating goal prime, while the other half of participants were assigned to the neutral condition and read a passage describing the interior of a building. After reading the assigned passage, participants viewed a row of four color photographs, representing the progressive life stage development of a bunch of bananas (new, developing, peak, decaying). The “new” bananas

¹No participants in Studies 1-3 indicated any awareness of the experimental hypotheses.

²It is reasonable to suspect that participant gender might moderate the effects of our manipulations; however, none of the significant findings reported in Studies 1-3 were moderated by gender: all F s $< 1.66, ps > .19$

were green; “developing” were of a yellow-green color; “peak” were completely yellow; and “decaying” bananas featured mottled-brown spots. Directly below each photograph, participants rated the attractiveness of the fruit at that stage on 10-point scales (1 = *not at all attractive*; 10 = *extremely attractive*).

Results

We conducted a 2 (priming: mating goal, neutral) $\times$ 4 (life-stage: new, developing, peak, decaying) mixed-model ANOVA, where Priming was a between-subjects factor, and Life-stage was a within-subjects factor. The data revealed a significant interaction, $F(2.65, 84.68) = 3.18, p < .05, \eta_p^2 = .09$ (see Figure 2). Consistent with Study 1, for participants primed with the mating goal, we again found less liking for non-peak stages relative to peak stages. Participants in the mating goal condition perceived the new bananas as less attractive than the developing bananas, compared to participants in the neutral condition, $F(1, 84.68) = 5.46, p < .05, \eta_p^2 = .15$. The data also revealed a stronger preference for the peak stage among mating-goal-primed participants: they rated the bananas in their peak stage as significantly more attractive ($M = 8.18, SD = 2.40$) than did participants in the neutral condition ($M = 5.94, SD = 2.11$), $t(32) = 2.88, p < .01, p_{rep} = .96, d = .99$.

Study 3

Study 3 provides a further test of our hypothesis of an evolved “preference for the peak” by comparing the effect of the mating prime on evaluations of living kinds versus artifacts. We hypothesized that participants primed with a mating goal would evaluate another living kind (a flower) in accordance with its life stage, but that this effect would not be present when judging a nonliving thing - that is, an artifact (an automobile).

Ninety-five participants (71 female, 4 no report) were recruited from a public forum internet website in exchange for the chance to \$50 in a raffle. They ranged from 18 to 60 years of age, with a mean age of 32.40 ($SD=10.00$). The procedure was similar to the previous studies, wherein half the participants were randomly assigned to either a mating prime or a neutral prime condition. Afterwards, these participants viewed a row of four color photographs featuring either a flower or a car (new, developing, peak, decaying). Both types of stimuli were presented in chronological order from left to right: the “new” flower was a bud; the “developing” flower featured half-way opened petals; at its “peak,” the flower was fully blossomed; and when “decaying” its petals had wilted. The “new” car was a basic automotive frame; when “developing,” it was almost built; the “peak” car was fully built; and the “decaying” car was discolored with advanced age. For each of the four photographs, participants rated the attractiveness of the object on 10-point scales (1 = *not at all attractive*; 10 = *extremely attractive*).

Results

To examine the hypothesis that the mating goal differentially affected evaluations of living kinds versus artifacts, we analyzed the flower and car data simultaneously in a 2 (priming: mating goal, neutral) $\times$ 2 (stimuli type: living kind, artifact) $\times$ 4 (life-stage: new, developing, peak, decaying) mixed-model ANOVA, with Priming and Stimulus-type as between-subjects factors, and Life-stage as a within-subjects factor. The analyses revealed the predicted three-way interaction of these factors, $F(2.33, 211.64) = 4.94, p = .005, \eta_p^2 = .05$. As we were interested in the differential effects of the goal prime upon life stage attractiveness ratings separately for living kinds versus artifacts, we analyzed this three-way interaction in terms of separate Priming $\times$ Life-stage interactions for the flower (living) and the automobile (non-living) stimuli.

For the flower stimuli, the simple Priming $\times$ Life-stage interaction was reliable, $F(2.55, 122.28) = 4.64, p < .01, \eta_p^2 = .09$. The pattern of means across the life-span stages closely resembled the goal-activated evaluative bias found in Studies 1 and 2. The new flower was rated as marginally less attractive by goal-primed ($M = 3.78, SD = 2.36$) than control participants ($M = 5.00, SD = 2.11$), $t(48) = 1.92, p = .06, p_{rep} = .86, d = .55$. In addition, the developing-stage flower was devalued relative to the peak. Participants primed with the mating goal found rated the developing flower as less attractive than the peak flower, more so than neutral-primed participants who did not distinguish the same extent between those stages, $F(1, 122.28) = 5.06, p < .05, \eta_p^2 = .10$. Finally, participants primed with the mating goal also found the decaying flower significantly less attractive ($M = 2.04, SD = 1.79$) than did neutral-primed participants ($M = 3.52, SD = 2.35$), $t(48) = 2.53, p < .05, p_{rep} = .94, d = .71$.

We also predicted and found more liking for the peak flower relative to the decaying flower in goal-primed participants. Participants primed with the mating goal rated the peak stage of the flower as more attractive than the decaying flower, $F(1, 122.28) = 9.77, p < .005, \eta_p^2 = .17$. This pattern of results suggests that for evaluations of the flower stimuli, attractiveness ratings by goal-primed participants were driven by flower life-stage, more so than were those of neutral-primed participants (see Figure 3).

As hypothesized, however, the effect of the active mating goal on preferences as a function of life-stage was limited to living kinds. As Figure 3 shows, the signature ‘preference for the peak’ pattern was not observed for the automobile stimuli, and the corresponding Priming $\times$ Life-stage interaction was nonsignificant, $F(2.11, 90.74) = 1.51, p = .23$. Taken together with the significant three-way interaction, the results of the separate two-way interaction analyses suggest that the active mating goal increases relative preference for the peak among living stimuli, but not artifacts.

General Discussion

In three studies, we obtained evidence for the hypothesis that the activation of the mating goal influences evaluations of living kinds across their lifespan. Participants who were primed with the mating goal subsequently evaluated living kinds according to their relative age, compared to neutral primed participants who did not show the same life-stage dependent bias. These goal-activated evaluation effects are analogous to age preferences in human mate selection (Kenrick & Keefe, 1992), wherein living kinds at their peak are more valued and immature or past-peak living kinds are relatively devalued.

The findings from Studies 2 and 3 replicated the relationship between the mating goal prime and age-based preferences observed in Study 1, and confirmed that the active mating goal affects judgments of living kinds but not artifacts. In addition, these studies established the generalization of mating goal effects not only to judgments of people outside the mating context, but also to non-incentive stimuli such as flowers and fruit. Across all three studies, the active mating goal resulted in stronger relative preferences for the peak life-stage of the living kinds studied, mainly through decreasing absolute preferences for the non-peak life stages (Studies 1, 2, and 3), although increased absolute preferences for the peak were observed in Study 2. At this point we can only ascribe such variations in the absolute level of the effect to vagaries of the different types of stimuli used in the three studies; our model makes only relative predictions under the assumption that these are what matter when one is selecting among a limited set of currently available alternatives.

The results support our hypothesis that the evaluative reach of the active mating goal extends to living kinds unrelated to satisfaction of that goal. Of course, alternative causal

directions are possible here and cannot be ruled out on the basis of our initial studies. For example, it is possible that an evaluative mechanism evolved for purposes of detecting the most nutritious among available fruits and other foods, and the mating goal has co-opted this mechanism for its own purposes. Additionally, the present findings are consistent with an alternative model in which priming of the mating goal produces an increased focus on the hedonic value of a stimulus, instead of on its perceived stage of life. On the other hand, our preferred 'sensitivity to the peak' model would predict similar findings in nonhedonic realms as well, such as in quick detection of the most potentially threatening person or animal. These are issues which could be fruitfully addressed in further research.

The present findings also contain some important theoretical implications. Firstly, we show that activating an evolved social motive (mating) influences evaluation and preferences beyond the interpersonal domain, affecting living things more generally. Further, this research supports broadening the concept of domain specific modules to include computational mechanisms that can be co-opted or used by multiple motives and goals (see Barrett & Kurzban, 2006; Shepard, 1992), as well as the existence of an evolved mechanism specialized for detecting growth and decay in living kinds.

When coming from a lover, it is indeed a compliment to be compared to a flower in bloom. When being evaluated in an unrelated domain such as career ability, however, activated age-related biases are not always as positive. We posit that a mating-activated sensitivity to the peak is deep-seated in our evolutionary past, having evolved for adaptive reasons. In its current-day context, however, this evolved goal and its supporting mental machinery are quite capable of unconsciously biasing judgments of living kinds across a variety of domains.

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References

- Bargh, J.A.; Chartrand, T.L. The mind in the middle: A practical guide to priming and automaticity research. In: Reis, H.T.; Judd, C.M., editors. *Handbook of research methods in social and personality psychology*. Cambridge University Press; New York: 2000. p. 253-285.
- Bargh J.A., Green M., Fitzsimons G.M. The selfish goal: Unintended consequences of intended goal pursuit. *Social Cognition*. in press.
- Bargh, J.A.; Huang, J.Y. The selfish goal. In: Moskowitz, G.; Grant, H., editors. *Goals*. Guilford; New York: in press
- Barr A, Bryan A, Kenrick D.T. Sexual peak: Socially shared cognitions about desire, frequency, and satisfaction in men and women. *Personal Relationships*. 2002; 9:287–299.
- Barrett H.C., Kurzban R. Modularity in cognition: Framing the debate. *Psychological Review*. 2006; 113:628–647. [PubMed: 16802884]
- Campbell, D.T. Evolutionary epistemology. In: Schilpp, P.A., editor. *The philosophy of Karl Popper*. Open Court Publishing; La Salle, IL: 1974. p. 413-463.
- Caramazza A, Mahon B.Z. The organization of conceptual knowledge: The evidence from category-specific semantic deficits. *Trends in Cognitive Sciences*. 2003; 7:354–360. [PubMed: 12907231]
- Cosmides, L.; Tooby, J. Cognitive adaptations for social exchange. In: Barkow, J.H.; Cosmides, L.; Tooby, J., editors. *The adapted mind: Evolutionary psychology and the generation of culture*. Oxford University Press; New York: 1992. p. 163-228.
- Dennett, D.C. *Darwin's dangerous idea*. Simon & Schuster; New York: 1995.
- Dijksterhuis A, Aarts H. On wildebeests and humans: The preferential detection of negative stimuli. *Psychological Science*. 2003; 14:14–18. [PubMed: 12564748]

- Gangestad S, Simpson J. The evolution of human mating: Trade-offs and strategic pluralism. *Behavioral and Brain Sciences*. 2000; 23:573–644. [PubMed: 11301543]
- Griskevicius V, Cialdini RB, Kenrick DT. Peacocks, Picasso, and parental investment: The effects of romantic motives on creativity. *Journal of Personality and Social Psychology*. 2006; 90:63–76. [PubMed: 16834480]
- Griskevicius V, Goldstein NJ, Mortensen CR, Cialdini RB, Kenrick DT. Going along versus going alone: When fundamental motives facilitate strategic (non)conformity. *Journal of Personality and Social Psychology*. 2006; 91:281–294. [PubMed: 16881765]
- Higgins, ET. Knowledge activation: Accessibility, applicability, and salience. In: Higgins, ET.; Kruglanski, AW., editors. *Social Psychology: Handbook of basic principles*. Guilford Press; New York: 1996. p. 133-168.
- Inagaki, K.; Hatano, G. *Young children's naive thinking about the biological world*. Psychology Press; New York: 2003.
- Katz D. The functional approach to the study of attitudes. *Public Opinion Quarterly*. 1960; 24:163–204.
- Kenrick DT, Gabrielidis C, Keefe RC, Cornelius JS. Adolescents' age preferences for dating partners: Support for an evolutionary model of life-history strategies. *Child Development*. 1996; 67:1499–1511. [PubMed: 8890497]
- Kenrick DT, Keefe RC. Age preferences in mates reflect sex differences in human reproductive strategies. *Behavioral and Brain Sciences*. 1992; 15:75–133.
- Kruglanski, AW.; Shah, JY.; Fishbach, A.; Friedman, R.; Chun, WY.; Sleeth-Keppler, D. A theory of goal systems. In: Zanna, MP., editor. *Advances in Experimental Social Psychology*. Vol. 34. Academic Press; San Diego: 2002. p. 331-378.
- Kunkel KE, Ruth TK, Pletscher DH, Hornocker MG. Winter prey selection by wolves and cougars in and near Glacier National Park, Montana. *Journal of Wildlife Management*. 1999; 63:901–908.
- Maner JK, Kenrick DT, Becker DV, Robertson TE, Hofer B, Neuberg SL, Delton AW, Butner J, Schaller M. Functional projection: How fundamental social motives can bias interpersonal perception. *Journal of Personality and Social Psychology*. 2005; 88:63–78. [PubMed: 15631575]
- McCulloch KD, Ferguson MJ, Kawada C, Bargh JA. Taking a closer look: On the operation of nonconscious impression formation. *Journal of Experimental Social Psychology*. in press.
- Medin DL, Atran S. The native mind: Biological categorization and reasoning in development and across cultures. *Psychological Review*. 2004; 111:960–983. [PubMed: 15482069]
- Neuberg, SL.; Kenrick, DT.; Maner, JK.; Schaller, M. From evolved motives to everyday mentation: Evolution, goals, and cognition. In: Forgas, JP.; Williams, KD., editors. *Social motivation: Conscious and unconscious processes*. Cambridge University Press; New York: 2004. p. 133-152.
- New J, Cosmides L, Tooby J. Category-specific attention for animals reflects ancestral priorities, not expertise. *Proceedings of the National Academies of Science*. in press.
- Ohman A, Mineka S. Fears, phobias, and preparedness: Toward an evolved module of fear and fear learning. *Psychological Review*. 2001; 108:483–522. [PubMed: 11488376]
- Roney JR. Effects of visual exposure to the opposite sex: Cognitive aspects of mate attraction in human males. *Personality and Social Psychology Bulletin*. 2003; 29:393–404. [PubMed: 15273016]
- Senate, M. See Jane date. *Red Dress Ink*; Ontario: 2001.
- Shepard, RN. The perceptual organization of colors: An adaptation to regularities of the terrestrial world?. In: Barkow, JH.; Cosmides, L.; Tooby, J., editors. *The adapted mind: Evolutionary psychology and the generation of culture*. Oxford University Press; New York: 1992. p. 495-532.
- Symons, D. Beauty is in the adaptations of the beholder: The evolutionary psychology of human female sexual attractiveness. In: Abramson, PR.; Pinkerton, SD., editors. *Sexual nature/Sexual culture*. University of Chicago Press; Chicago: 1995. p. 80-118.
- Tomasello M, Carpenter M, Call J, Behne T, Moll H. Understanding and sharing intentions: The origins of cultural cognition. *Behavior and Brain Sciences*. 2005; 28:675–735.

Figure 1. Mean ratings of the applicability of the quotation as a function of career stage, separately for mating and neutral goal prime conditions; Study 1. Error bars represent standard errors of the mean.

Figure 2. Mean attractiveness ratings as a function of fruit life-stage, separately for mating and neutral prime conditions; Study 2. Error bars represent standard errors of the mean.

Figure 3. Difference scores for mean attractiveness ratings between mating and neutral prime conditions, as a function of object life-stage for organic and inorganic stimuli; Study 3.