

# MALE PRONENESS TO VERBAL DISPLAY PRODUCTION

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*Summary:* The Darwinian theory of sexual selection predicts language-related sex differences in humans originating from and relevant for mate choice. Due to past sex-different selection pressures, it can be assumed that men are more prone to verbal displays than women, both in intrasexual competition and in intersexual selection (i.e., courtship). They should benefit more from high verbal proficiency in mate choice than women. Several hypotheses in the framework of these general evolutionary assumptions were tested using two questionnaires with a total sample of 234 participants.

## 1. Introduction

The evolution of language is one of the most discussed topics in the history of science. In the past years, especially the role of sexual selection has increasingly been emphasized. According to this perspective, language serves as a so-called fitness indicator following the handicap principle and thus generally for displaying one's suitability for being a sexual mate [Miller 2000; Locke, Bogin 2006; Rosenberg, Tunney 2008]. According to the Darwinian theory of sexual selection [Darwin 1871], sex differences in reproductive conditions and thus past sex-different selection pressures must have caused language-related sex differences. As women are choosier because of a higher obligatory maternal investment in offspring [Trivers 1972], men are the ones who need to display their qualities, for instance by means of language. Contrary to women, men benefit from any extra-copulation. If some men gain access to many women, other men are threatened to remain mateless. Thus, intrasexual competition is higher in males than in females, supposedly regarding language as well. Therefore, men are supposed to be more prone than women to any sort of verbal displays, in intersexual (i.e., courtship) as well as intrasexual selection.

A growing body of evidence support this perspective: For instance, sexually-selected traits should appear due to a maturational timetable when they are needed for mate choice. This applies to language, as language acquisition is finished around puberty, when mate choice becomes relevant [Miller 2000]. On a behavioral level, supporting assumptions on the intersexual selection of language, men are self-exposers by means of language [Miller 2000; Buss 2003]. They tend to talk more about themselves than about others [Dunbar 1996]. In a conversation with a woman, they talk the more about themselves, the more attractive she is [Garcia et al. 1991]. Especially in large groups, they try to get as much speaking time as possible, while women back off in order to judge the male displays which reminds of the mating behavior of lekking species [Dunbar 1996]. Most literature is produced by men at reproduction-relevant age [Miller

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1999]. Mate choice triggers men to use infrequent words as a display [Rosenberg, Tunney 2008]. Men make more jokes and receive more laughs than women and use this for display reasons [Wildgen 2004].

For the assumed role of language in male intrasexual selection, evidence is available too. Archer [2009] found in his meta-analysis on sex differences in aggression higher male than female verbal aggressiveness. Men use language for competition, domination and for achieving and maintaining their status, especially in communication with other men [Eckert, McConnell-Ginet 2003]. In same-sex communication, men make more commands, claim more speaking time than in other contexts [Athenstaedt et al. 2004], and make more non-supportive than supportive interruptions [Makri-Tsilipakou 1994].

If men are more prone to verbal displays, they should benefit more from these displays and high verbal proficiency in mate choice than women. There are hints supporting this hypothesis: Universally, across all cultures, men benefit more from high eloquence than women [Brown 1991]. Women laugh more about male than female jokes [Dunbar 1996] and show a higher preference than men for a humorous mate. Furthermore, they prefer intelligent mates [Feingold 1992], and linguistic subtests in intelligence tests highly correlate with total scores [Wechsler 1958].

The current two studies using two questionnaires were conducted to empirically test several hypotheses on language originating from sexual selection theory and thus to put the above mentioned data to the test too. Moreover, several hypotheses were proposed which, to the author's knowledge, have not been tested so far. Miller [1999], for instance, showed that most literature is produced by men, which supports expectations from an evolutionary perspective. However, this could also be explained by patriarchy, which hinders women to write literature. Hence, it was tested if men are higher motivated than women to write books. If so, merely referring to patriarchy as an alternative explanation would be insufficient. Furthermore, no study is known to the author, which assesses the effect of low verbal proficiency on otherwise high attractiveness. Hence, the hypothesis was tested that lack of verbal proficiency is more detrimental for male than female mate value (see scenario below).

For the studies, focus lay on the one hand on male motivation for verbal displays, which is most easily assessable by questionnaires. On the other hand, it should be empirically tested if male verbal proficiency can be considered a female mate choice criterion. Three sets of hypotheses existed:

(1) Male Display Production: items covering this aspect are expected to show higher means for men than for women.

(2) Female Display Reception: items about male verbal proficiency as a female mate choice criterion are expected to show higher means for women than for men.

(3) Male Verbal Competition: Theoretical assumptions on intrasexual selection predict higher means for men than for women for items of this group.

Furthermore, because men benefit evolutionarily from a large number of mates, positive correlations between the number of mates and the values of the Male Display Production items and the Male Verbal Competition items were expected.

## **2. Methods**

### **2.1. Participants**

Participants were students at the University of Kassel attending a psychology lecture. The first study was conducted with 125 participants (37 males, age range of 18 to 34 years, median = 21), the second with 109 participants (35 males, age range of 18 to 43 years, median = 21 years). The uneven sex ratio was the result of an unequal sex distribution in the lectures.

### **2.2. Questionnaire and Procedure**

The two questionnaires of the two studies asked a total number of 54 questions to be answered on a 6-point rating scale (1 = no affirmation, 6 = highest affirmation) about male display production (e.g., «I have once considered writing a book»), female display reception (e.g., «I like to read novels and other forms of literature such as plays»), and male verbal competition (e.g., «If I have a conflict with a person of my sex, I seek the verbal confrontation in order to decide it in favor of myself»). One of the items described a scenario to be given an attractiveness rating: «Imagine that you meet a person of the opposite sex whom you would consider the perfect mate so that you would give the highest rating if you had to rate his/her overall attractiveness. Now imagine that in your first conversation, the other person has problems articulating, is always seeking for the right words and makes many linguistic mistakes such as confusing words so that you would consider him/her verbally unproficient. What would your rating of his/her overall attractiveness be now?» (see Table 1: «Scenario of attractive person found to be verbally not proficient»).

For the second study, the questionnaire was modified (some items replaced or changed and new items added) based on the results of the first study. Both questionnaires in the original German version can be retrieved under: <http://www.uni-kassel.de/fb4/psychologie/personal/lange/Frageboegen-Lange.pdf>

Both studies tested the same three sets of hypotheses using partially different items. If two items of both studies were similar, they were treated as one for the results. The questionnaires were handed out while the students were waiting for the professor. Participation was anonymous and voluntary, and did not contribute to course credit.

## **3. Results**

Table 1 presents the results for both studies for the Male Display Production items, which were predicted to show higher means for men than for women. The prediction was numerically confirmed for all items and statistically significant for the majority of them, with generally moderate effect sizes.

Table 1. Means (*n* in parentheses) and statistical values for Male Display Production items

Item	Means		Differences		
	Men	Women	<i>t</i>	<i>p</i>	<i>d</i>
In a conversation, I talk more about myself than about others	3.01 (71)	2.85 (162)	1.05	ns	–
I get upset conversation someone interrupts me and monopolizes the conversation	4.67 (72)	4.66 (161)	0.05	ns	–
I find it comparatively easy for me to talk in front of an audience	3.80 (71)	3.17 (162)	3.12	<.002	0.44
If I meet a person whom I consider a potential mate because of his/her attractiveness, I would be upset if I did not find the right words in the decisive moment	4.82 (72)	4.60 (161)	1.27	ns	–
I have once considered writing a book	3.46 (35)	2.69 (74)	2.00	<.03	0.40
If I am interested in someone, I positively change my verbal behavior	4.24 (34)	3.73 (73)	1.77	<.04	0.37
If it is about approaching an interesting potential mate and starting communication, I am the one who tends to make the first step	3.44 (34)	2.82 (74)	1.99	<.03	0.41
<i>Scenario of attractive person found to be verbally not proficient</i>	3.42 (72)	2.84 (161)	3.03	<.002	0.43
In the presence of a potential mate, I frequently use impressive and unknown words	2.68 (71)	2.36 (162)	1.77	<.04	0.25
In the presence of a potential mate, I try to talk stylistically well and to appear rhetorically talented	3.59 (34)	3.26 (74)	1.14	ns	–

Table 2 shows the results for both studies for the Female Display Reception items, which were predicted to show higher means for women than for men. However, only four items resulted in higher means for women than for men, only two of them statistically significant.

Table 2. Means (*n* in parentheses) and statistical values for Female Display Reception items

Item	Means		Differences		
	Men	Women	<i>t</i>	<i>p</i>	<i>d</i>
When I read a book which I like a lot, I admire its writer	4.07 (71)	4.05 (158)	0.09	ns	–
I like to read novels and other forms of literature such as plays	2.77 (35)	4.27 (73)	– 4.98	<.001	-1.02
A writer/poet is an attractive/interesting potential mate (for me)	2.68 (69)	2.49 (162)	1.04	ns	–
A person who attracts attention due to his/her linguistic extravagance (expression, faultlessness, sentence length, com-	3.41 (71)	3.08 (161)	1.71	<.05	0.24

plexity, fluency, style, rhetoric) is an attractive/interesting potential mate (for me)					
A person who is able to talk well in public is an attractive/interesting potential mate (for me)	3.56 (71)	3.47 (161)	0.53	ns	–
A person who writes poetry for me is an attractive/interesting potential mate (for me)	3.26 (70)	3.30 (159)	– 0.19	ns	–
A person with a strikingly large lexicon is an attractive/interesting potential mate (for me)	3.61 (71)	3.43 (159)	1.05	ns	–
A person whose profession includes speaking in front of others in order to teach them or to convince them of something is an attractive/interesting potential mate (for me)	3.69 (71)	3.63 (158)	0.35	ns	–
A person with high expressiveness, linguistic creativity, complexity, and fluency is an attractive/interesting potential mate (for me)	3.79 (71)	3.54 (158)	1.49	ns	–
A person who is able to tell funny things is an attractive/interesting potential mate (for me)	4.57 (35)	4.70 (73)	– 0.54	ns	–
It is important for me to have a mate who makes his voice heard	4.29 (72)	4.13 (160)	0.98	ns	–
It is important for me to have a mate who is able to defy others verbally	4.82 (72)	4.48 (160)	2.21	<.02	0.31
I regularly talk with same-sex friends about interesting potential mates	4.38 (34)	4.12 (74)	0.76	ns	–
How important is gossip for you as a source to gain information about potential mates?	2.90 (72)	3.48 (161)	– 2.77	<.004	-0.39

Table 3 shows the results for both studies for the Male Verbal Competition items, which were predicted to show higher means for men than for women. For two of three items, higher means for men than for women were found, one of them statistically significant.

Table 3. Means (*n* in parentheses) and statistical values for Male Verbal Competition items

Item	Means		Differences		
	Men	Women	<i>t</i>	<i>p</i>	<i>d</i>
If someone interrupts me, I am more upset when the interrupter has the same sex as me	2.77 (35)	2.69 (72)	0.23	ns	–
If I have a conflict with a person of my sex, I seek the verbal confrontation in order to decide it in favor of myself	4.51 (35)	3.90 (72)	2.09	<.02	0.43
I use language to assert my interests and myself	4.59 (34)	4.62 (74)	-0.13	ns	–

As for the correlations between number of sexual mates of the male participants and their responses to the items on Male Display Production and Male Verbal Competition in the second part of the study, ten out of 13 correlations were positive (controlling for age; one-tailed). However, most of them were comparatively small and not statistically significant. Only for two items, there was statistical significance or a tendency towards significance, respectively: (1) «If I meet a person whom I consider a potential mate because of his/her attractiveness, I would be upset if I did not find the right words in the decisive moment» ( $r_{p(26)}=.32$ ;  $p<.05$ ). (2) «In the presence of a potential mate, I try to talk stylistically well and to appear rhetorically talented» ( $r_{p(25)}=.31$ ;  $p<.06$ ).

#### **4. Discussion**

All Male Display Production items showed higher means for men than for women. Most of the sex differences were statistically significant with moderate effect sizes. One might claim that these results merely replicate what is already known, for instance that men feel more comfortable talking in front of an audience [Dunar 1996]. Still, each replication strengthens the position of an evolutionary perspective on language. Furthermore, also hypotheses were tested which, to the author's knowledge, have not been examined so far, for instance that men should be more prone than women to write books. In sum, the findings support the hypothesis that men are more prone to verbal display production than women.

However, male motivation for verbal displays could not have evolved if ancestral women had not favored men who showed such displays, everything else being equal. Therefore, it is surprising that almost all items regarding female display reception, which were predicted to show higher means for women than for men, did indeed had lower means. One exception is females' strong preference for reading literature. Considering that men are more motivated than women to write books (see Table 1), the relation between (female) demand and (male) supply can be found, as expected from an evolutionary perspective. However, female participants did not express higher preference for a writer/poet as a mate than men did (see Table 2), as would have to be predicted by evolutionary theory and by the obtained relation between demand and supply. This might be due to the stereotype that there is no money in writing literature, as women prefer well-off men [Buss 2003]. More convincing evidence that men benefit more from high verbal proficiency than women can be seen in the scenario item (Table 1), according to which a lack of verbal proficiency has more negative impact on male than on female attractiveness.

Several specific hypotheses about women's appreciation of verbally proficient men were not supported, which might have been due to the formulation of the items. Most items reduce a man to one specific trait, such as being a writer. As women are choosier and thus have a broader palette of mating preferences than men [Buss 2003], items which only cover one specific aspect, such as being a writer, may be of insufficient validity. Therefore, an experimental design is needed which covers language competence in more features and allows to test whether (1) verbal proficiency increases a person's attractiveness, and (2)

whether this increase interacts statistically with sex, meaning that men benefit more from verbal proficiency than women do. The scenario item (see Table 1) strongly suggests that this should be the case. These data will soon be presented by the author. Moreover, further research needs to elucidate the inconsistent findings on the role of sexual selection in the production and especially the reception of literature: Comparative research could examine the mating successes of real writers/poets and relate them to their successes in producing literature. Also these data will soon be presented.

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## **REFERENCES**

- Archer 2009 – *Archer J.* Does sexual selection explain human sex differences in aggression? // *Behavioral and Brain Sciences*, 32 (2009).
- Athenstaedt et al. 2004 – *Athenstaedt U., Haas E., Schwab S.* Gender role self-concept and gender-typed communication behavior in mixed-sex and same-sex dyads // *Sex Roles*, 50 (2004).
- Brown 1991 – *Brown D.E.* Human universals. New York, NY: MacGraw-Hill, 1991.
- Buss 2003 – *Buss D.M.* The evolution of desire: strategies of human mating. New York, NY: Basic Books, 2003.
- Darwin 1871 – *Darwin C.R.* The descent of man and selection in relation to sex. London: John Murray, 1871.
- Dunbar 1996 – *Dunbar R.I.M.* Grooming, gossip, and the evolution of language. London: Faber and Faber, 1996.
- Eckert, McConnell-Ginet 2003 – *Eckert P., McConnell-Ginet S.* Language and Gender. Cambridge: Cambridge University Press, 2003.
- Feingold 1992 – *Feingold A.* Gender differences in mate selection preferences: a test of the parental investment model // *Psychological Bulletin*, 112 (1992).
- Garcia et al. 1991 – *Garcia S., Stinson L., Ickes W., Bissonnette V., Briggs S.R.* Shyness and physical attractiveness in mixed-sex dyads // *Journal of Personality and Social Psychology*, 61(1) (1991).
- Locke, Bogin 2006 – *Locke J.L., Bogin B.* Language and life history: A new perspective on the development and evolution of human language // *Behavioral and Brain Sciences*, 29 (2006).
- Makri-Tsilipakou 1994 – *Makri-Tsilipakou M.* Interruption revisited: affiliative vs. disaffiliative intervention // *Journal of Pragmatics*, 21 (1994).
- Miller 1999 – *Miller G.F.* Sexual selection for cultural displays // Dunbar R., Knight C., Power C. (eds.). *The evolution of culture. An interdisciplinary view.* Edinburgh: Edinburgh University Press, 1999.
- Miller 2000 – *Miller G.F.* The mating mind. How sexual choice shaped the evolution of human nature. New York, NY: Doubleday, 2000.

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- Rosenberg, Tunney 2008 – *Rosenberg J., Tunney R.J.* Human vocabulary use as display // *Evolutionary Psychology*, 6 (2008).
- Trivers 1972 – *Trivers R.* Parental investment and sexual selection // Campbell B.B. (ed.). *Sexual selection and the descent of man*. Chicago: Aldine, 1972.
- Wechsler 1958 – *Wechsler D.* *The measurement and appraisal of adult intelligence*. Baltimore: Williams and Wilkins, 1958.
- Wildgen 2004 – *Wildgen W.* *The evolution of human language. Scenarios, principles, and cultural dynamics*. Amsterdam: John Benjamins Publishing Company, 2004.