

FEMALE-LEFT AND MALE-RIGHT POSITIONING BY YOUNG JAPANESE COUPLES

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I discovered a phenomenon related to nonverbal sex differences in young Japanese couples in which the female tends to assume the left side position and the male tends to assume the right position (FM tendency) when the couple are walking on sidewalks and in parks. As the first step of the present study, some aspects of this phenomenon were examined through field observation. In total, 2,827 couples (teens and 20s: 1,799; 30s and 40s: 732; older than 50: 296) were examined. The following facts were clarified: (1) Couples in their teens and 20s couples showed a clear FM tendency, and couples older than 30 did not. (2) The FM tendency in couples in their teens and 20s was seen in all places where observations were done (street, sightseeing park, shopping center). (3) The FM tendency was seen when neither the female nor the male was carrying anything. Each person tended to take a position to avoid having any parcel, handbag, or other item between the partners. (4) The FM tendency was seen when neither partner touched the other, and when both partners reciprocally touched. When only the female touched her partner, the FM tendency was especially conspicuous. When only the male did, the FM tendency was not seen. As an essential causation of the FM tendency, the intention by females to touch their partners by the dominant right hands was suggested.

INTRODUCTION

It is probable that there are many sexually based human behavior in public places remaining unnoticed. We are often surprised and wonder why we have not previously noticed new gender differences when they are discovered. For example, the observational study by Collett and Marsh (1974) about how people move through aisles in crowded shopping centers revealed that when males and females must pass near other individuals, the females usually turn away from them, while the males are more likely to turn toward them. Morris (1977) states about this discovery that it may be easy to examine the causation of the gender difference once it is noticed, but the point is that until the research observation had been made, no one was even aware that the difference existed. That it did was undoubtedly being registered by the eyes of the male and female shoppers, and they were all unconsciously clocking up their scores of gender signals as they passed through the crowd, but they never stopped to analyze how they were doing it.

The scientific value of finding new phenomena of this kind is clear. It often provides us with important information for the progress of sexual difference studies and the biological understanding of humans.

I recently discovered a phenomenon in the male-female interaction of young Japanese couples walking on sidewalks and in parks that has not yet been reported. Among walking couples, the males tend to assume the right-side position and the females the left-side. Although many research projects on nonverbal behaviors exchanged between males and females in public places have been under-

taken, no reports have referred to side-positioning by males and females in couples.

If this phenomenon is stable, the possibility exists that a thorough investigation about it will provide useful information related to the study of reproductive strategies in behavioral interactions between males and females, of humans, which has been a main theme of human behavioral ecology (e.g., Wickler and Seibt, 1983; Flinn, 1988; Grammer, 1993), and/or the study of sex differences in interpersonal touch, which has been an important topic of nonverbal sex differences (Henley, 1973; Hall and Veccia, 1990).

As the first step, in the present study a field observation was performed in a park, a street, and a shopping center to examine (1) the relation between side-positioning by couples and ages of individuals, (2) the side-positioning by couples walking and carrying something or not carrying something, (3) the relation between side-positioning and body touching by couples.

METHOD

Field observations were conducted at sidewalks, sightseeing parks, and shopping centers of Okayama city and Kurashiki city, Japan. The sidewalks selected for the observation were wide (about 6.5m), and separated from the roadways by obstacles, such as concrete blocks and trees or plants. It appeared that pedestrians paid little attention to vehicle traffic.

Couples on the streets were observed in the morning (from about 7 to 8:30) and in the evening (from about 5 to 8) on weekdays, and couples in sightseeing parks and shopping centers were observed on weekends.

The following variables were recorded for the individuals in each couple. (1) Age and sex: Ages were estimated among 6 categories - teens, 20s, 30s, 40s, 50s, older than 60. Before and during formal data gathering, I performed trial age estimations on 34 persons of various ages (18 males and 16 females) whom I had never met. The error was 8.8%. (2) Lateral position relative to the partner: The sex of the member on the right was recorded. (3) Side of item(s) being carried: The side on which an item was being carried, either by hand or by hanging from the shoulder, was recorded. In the present study, other methods of carrying items were not recorded partly because they were too unusual. (4) Touching: The touching was classified into 4 categories: (i) No touch; (ii) Reciprocal touch (male and female touch each other by hand); (iii) Only the male touches his partner by the hand; (iv) Only the female touches her partner by the hand.

RESULTS

Eighty-seven percent of the observed couples were judged to consist of a male and a female belonging to the same age category. I use the term "aged-20s couple" for a couple consisting of the male and female both being in their 20s, and similar terms for couples of the other age categories. Mixed-aged couples (consisting of males and females of different age categories) were eliminated from the data when some tendency related to age was analyzed, and they were added into the data when general tendency concerning the couples' behaviors was analyzed.

In the data analyses, teenaged couples and aged-20s couples were integrated into teenaged and aged-20s couples, aged-30s couples and aged-40s couples into couples in their 30s and 40s, and aged-50s couples and couples older than 60 into couples older than 50 to lessen the influence of the age-estimation error (8.8%).

In the analysis of the influence of each of the carried items and the touches, couples carrying items and also touching were eliminated from the data.

Relationship between side-positioning and age

The tendency of females to take the left side and males the right side when walking together (Figure 1-a,b,d) (I call this the FM-tendency) was seen in all age categories, though the statistical

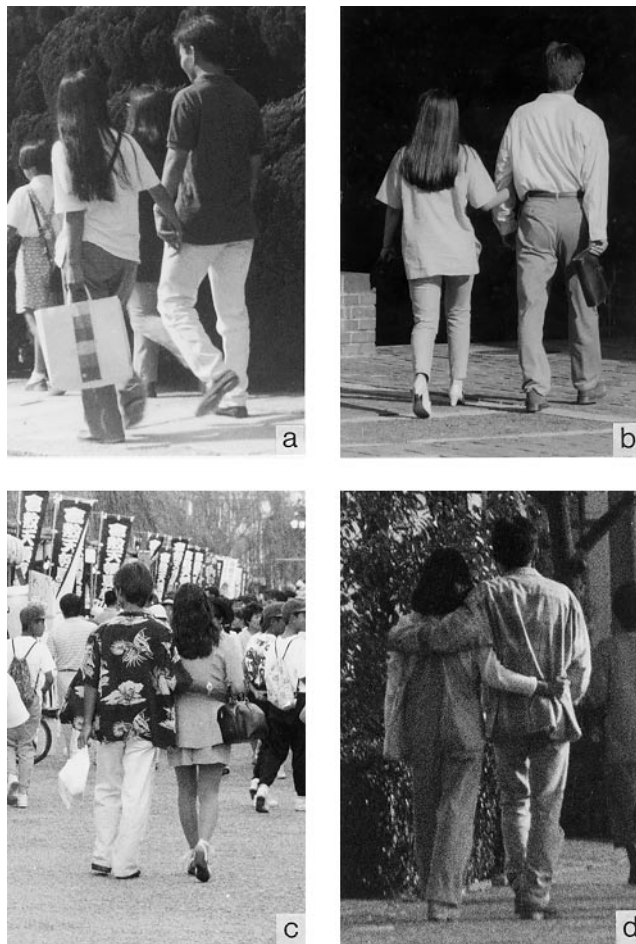


Fig. 1. Young Japanese couples walking in a street or in a park.

Table 1. Relation between ages and numbers of FM- and MF-positioned walking couples.

	Age			Total
	teens & 20s	30s & 40s	older than 50	
FM-positioned couple	1,092 **	382	152	1,626 **
MF-positioned couple	707	350	144	1,201

**: $p < 0.01$ (binomial test)

significance of the tendency was found only in teenaged and aged-20s couples ($p < 0.01$ binomial test) (Table 1).

Side-positioning tendency in “walking” couples at different places

The FM tendency was seen in all three places (sidewalk, sightseeing park, shopping center) (Table 2). The statistical significance of this tendency was seen everywhere with teenaged and aged-20 couples.

Table 2. Numbers of FM- and MF-positioned couples in different places.

	Age			Total
	teens & 20s	30s & 40s	older than 50	
Sidewalk				
FM-positioned couples	382 **	119	40	541 **
MF-positioned couples	251	107	39	397
Sightseeing park				
FM-positioned couples	655 **	207	67	929 **
MF-positioned couples	420	189	67	676
Shopping center				
FM-positioned couples	55 *	56	44	155 *
MF-positioned couples	37	54	38	127

*:p < 0.05, **:p < 0.01 (binomial test)

Relation between side positioning and side of baggage

In the present study, the manner of carrying items was not recorded in field observations; therefore, the number of individuals with an item(s) is the total of individuals holding items by hand and those with items hanging from shoulder.

Figure 2 shows the numbers of FM- and MF- positioned couples in each combination of female's held-item side and male's held-item side ("MF" means "male-left and female-right"). The first important thing is that when neither a female nor a male is holding an item, the FM positioned couples numbered significantly more than the MF-positioned ones in teenaged and aged-20s couples (p < 0.01 binomial test), but they were not significantly more in couples older than 30.

Figure 3 shows the relation between the side positioning and the side of the carried item. The figure was made by the following procedures: I decided that the CAI (conflict-associated index) is -1 when an individual has an item between her (him) and the partner; that is, the carried item conflict with the partner, and CAI is +1 when an individual has an item on the side opposite the partner. The CAI in each couple was defined to be the total of CAI for the female and CAI for the male. For example, the CAI of the FM positioned couple taking the carried-item side combination of Figure 2-h (that is, the couple like Figure 1-a) is +1 because the CAI of the female is +1, and the CAI of the male is 0. Then, the value of "CAI in the FM-positioned couple"-"CAI in the MF-positioned couple" in each baggage-side combination (a-i) was calculated. For example, in Figure 2-b the value is +4 because "CAI in FM" is +2, and "CAI in MF" -2. Similarly, it is +2 in Figure 2-a and h, 0 in c, e and g, -2 in d and i, and -4 in f. The meaning of the value of "CAI in FM"-"CAI in MF" is as followings: When it is + in certain instance of carried-item side combination, FM positioning produces less physical conflict between the item and the partner than MF positioning does. When it is -, MF positioning produces less conflict. In the figure, the values of "CAI in FM"-"CAI in MF" (+4, +2, 0, -2, -4) are put on abscissa, and the values on the ordinate axis show the quotients of "total number of FM-positioned couples / total number of MF-positioned couples" in each value on the abscissa. For example, when "CAI in FM"-"CAI in MF" is +2 ("a" and "h" in Figure 2), it was calculated by dividing the total number of FM-positioned couples in "a" and "h" by the total number of MF-positioned couples in "a" and "h".

Figure 3 shows the following in regard to the relation between the side positioning and the side of the item. (1) Persons of all age categories generally tend to select side positioning so that an individual has no item on the same side as the partner. For example, when a female has an item on her right and a male has one on his left, the couple more frequently takes MF positioning than FM positioning, such as "c" in Figure 1. (2) The effect of disposition to avoid the same-side conflict between an item and the partner as in (1) is added to FM tendency in teenaged and aged-20s couples.

TEENAGED AND AGED-20S COUPLES

	R	a. **	b. **	c. *
		FM · MF	FM · MF	FM · MF
		39 15	37 14	36 21
Male	L	d.	e.	f.
		FM · MF	FM · MF	FM · MF
		21 26	21 13	16 24
	N	g. **	h. **	i.
		FM · MF	FM · MF	FM · MF
		208 148	156 44	98 87
		N	L	R
		Female		

COUPLES OLDER THAN 30

	R	a.	b. *	c.
		FM · MF	FM · MF	FM · MF
		29 25	21 10	43 34
Male	L	d. *	e.	f. *
		FM · MF	FM · MF	FM · MF
		16 31	17 20	9 32
	N	g.	h.	i.
		FM · MF	FM · MF	FM · MF
		141 128	126 117	44 63
		N	L	R
		Female		

Fig. 2. The numbers of FM- and MF-positioned couples in various combinations of baggage-holding sides. FM: The female is on the left side and the male is on the right. MF: The male is on the left side and the female is on the right. R: Carrying item on his or her right side. L: Carrying item on his or her left side. N: Carrying nothing. Cases a to i show various combinations of items being held at the sides of a female/male couple. For example, Fig. 1-a is FM of case h (the female carries the item on her left and the male carries nothing); Fig.1-b is FM of case b, and Fig.1-c is MF of case f. The upper figure shows the results of teenaged and aged-20s couples, and the lower shows the results of couples older than 30. The asterisk * shows $p < 0.05$ (binomial test), and ** shows $p < 0.01$ between the numbers of FM- and MF-couples in each side-carrying combination.

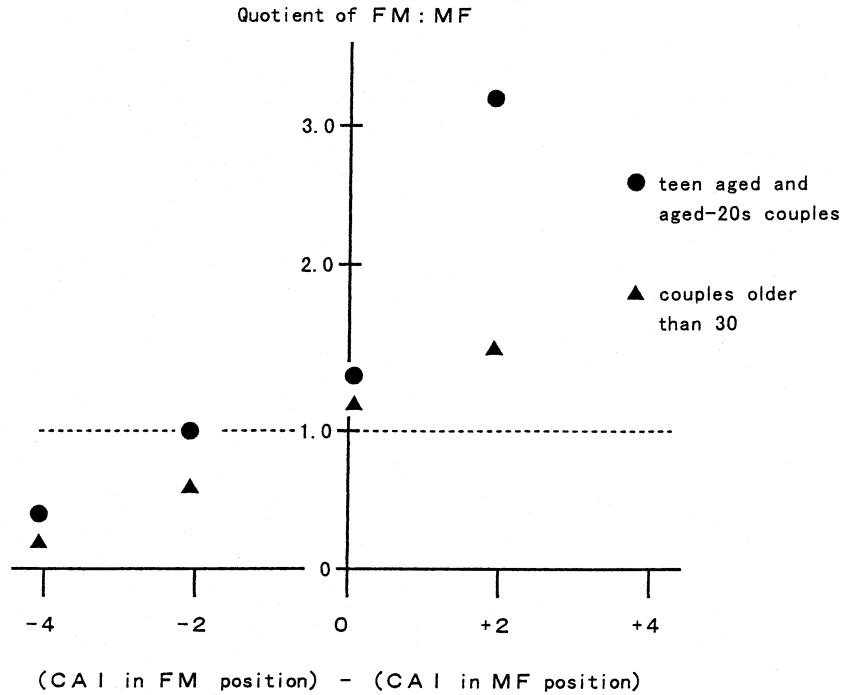


Fig. 3. Relation between the side-carrying combination and the side positioning by couples with special attention being paid to physical conflict between the item being carried and the partner. It was decided that the CAI (conflict associated index) is -1 when an individual has an item between herself (himself) and the partner, and it is +1 when the item being carried is on the side opposite the partner. The CAI in each couple was defined to be the total of CAI for the female and CAI for the male. Then the value of “CAI in an FM-positioned couple” minus (-) “CAI in an MF-positioned couple” in each side-carrying combination (a to i in Fig. 2) was calculated. The meaning of the value of “CAI in FM” minus (-) “CAI in MF” is as follows: When it is plus (+) in a side-carrying combination, the FM positioning produces less physical conflict between the item being carried and the partner than MF positioning does. When it is minus (-), MF positioning produces less conflict. The figure was drawn by the following procedure. The values of “CAI in FM” minus (-) “CAI in MF” (+4, +2, 0, -2, -4) were put on abscissa axis. The values on ordinate show the quotients of “total number of FM-positioned couples / the total number of MF-positioned couples” in each value on the abscissa.

Relation between the side positioning and the situation of touch

As for the kind of touch, by hand to hand (Figure 1- a), to arm by hand (Figure 1-b), to body by hand or arm (Figure 1-c), and to shoulder by hand or arm (Figure 1-d) were observed. In the present study, no touch, one-way touch, or reciprocal touch was recorded for each couple, and the kind of touch was not recorded. One-way touch includes touch to the shoulder by hand or arm, one the body by hand or arm, and one to the arm by hand. Reciprocal touch includes touch to the hand by hand and some combination of a one-way touch.

The rates at which the touch was observed in each age category were 0.39 in teenaged and aged-20s couples, 0.16 in aged-30s and aged-40s couples, and 0.05 in couples older than 50.

The following tendencies were clarified for teenaged and aged-20s couples. (1) FM positioning was more frequent than MF positioning when an individual or both individuals of a couple touched the other individual ($p < 0.01$ binomial test), and when there was no touch between a male and a female ($p < 0.01$ binomial test) (Table 3). The ratio of the number of FM-positioning couples vs. the number of MF-positioning couples (I abbreviate this as FM:MF) for couples in touching (both recip-

Table 3. Relation between touch and side-positioning by couples of teenaged and aged-20s couples.

	No touch	Touch				Reciprocal	Total
		One way		Total			
		by male	by female				
FM-positioned couple	996 **	67	179 **	246	288 **	534 **	
MF-positioned couple	663	82	91	173	201	374	
Quotient of FM:MF	1.50	0.81	1.96	1.42	1.43	1.43	
		††	††	†			
		††		†			
			††				
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					††		
						††	

**: $p < 0.01$ (binomial test), †: $p < 0.05$, ††: $p < 0.01$ (χ^2 -test)

reciprocal and one-way touches) was slightly lower than FM:MF in not touching. However, they were not statistically different from each other (FM:MF of the former is 1.43:1.00, and FM:MF of the latter is 1.50:1.00). (2) FM:MF for couples experiencing one-way touches (1.42:1.00) was not statistically different from FM:MF for couples experiencing reciprocal touch (1.43:1.00). (3) FM:MF for couples experiencing one-way touching by the female partners (1.96:1.00) was significantly higher than FM:MF for couples touching (1.43:1.00) ($p < 0.01$, χ^2 -test) than FM:MF for couples in not touching (1.50:1.00) ($p < 0.01$, χ^2 -test). (4) FM:MF for couples experiencing one-way touches by the male (0.81:1.00) was significantly lower than FM:MF for couples in touching ($p < 0.01$, χ^2 -test) than FM:MF for couples not touching ($p < 0.01$, χ^2 -test).

DISCUSSION

The results of the present study are summarized into five facts as follows. (i) Teenaged and aged-20s couples tended to take the FM position more often than the MF position. This tendency was not seen in couples of the older age categories. (ii) The FM tendency in teenaged and aged-20s couples was seen in all places where observations were made (sidewalks, sightseeing parks, shopping centers). (iii) When neither the female nor the male was carrying something, the FM tendency was seen. Each one of a couple tended to take a position to avoid keeping the carried item between them. (iv) When neither the female nor the male touched the partner and when both reciprocally touched each other, FM tendency was seen. (v) When only the female touched her partner, the FM tendency was more conspicuous than when couples did not touch or reciprocally touched. When only the male touched his partner, MF positioning was slightly more frequent than FM positioning.

The summarized results of (i) to (v) indicate the following facts or possibilities. (1) A clear FM tendency appears only in teenaged and aged-20s couples (result (i)). This suggests that the tendency may be related to some reproductive strategy of humans. (2) The result of (ii), (iii), and (iv) indicate that the FM tendency in young couples discovered in the present study is not caused by physical reasons related to vehicle traffic, carrying something, or touching the partner. (3) The conspicuous FM tendency during touching only by females and slightly more often MF positioning than FM one in the case of one-way touching by males (result (v)) suggest the following: The FM tendency is related to the female's intention to touch her partner from the left side. Furthermore, there is a general tendency for individuals intending to touch their partners to take the left position.

I surmise that the tendency of "touching-individual-left and touched-individual-right" is caused

by the toucher's intention to touch the partner by the dominant hand. (Generally it is said that the dominant hand of nearly 90% of humans is the right hand (e.g., Moriss, 1977)).

An integrative consideration of (1) to (3) produces the supposition about the cause and function of the FM tendency as follows. The main cause of this tendency may be the female's intention to touch her partner by the dominant hand (usually the right hand). And the female walking with a partner may be trying to convey the message "I follow you" or "Please guide me" to the partner through real or potential touch by the dominant hand. An attitude of dependence by females can be observed in courtship-like behavior exchanged between a female and a male in a sexual-pair relationship in many animals including humans (e.g., Eibl-Eibesfeldt, 1974; Grammer, 1993; Kobayashi, 1994). The FM positioning may function to promote the formation and maintenance of a sexual pair bond. Further investigation is necessary to better clarify causation of the occurrence of the FM tendency in young couples and its biological meaning.

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