Hanks, G. D. University of Utah, Salt Lake City, Utah. RD (Recovery Disrupter) activity associated with various wild type X chromosomes.

Males were taken from various wild type stocks and mated to attached-X females containing an RD background including the Y chromosome. After 6 backcross generations (8 for Oregon R) males were tested extensively by mating to 5 al, ru tester females. Results are given in Table 1. It is noteworthy that apparently some ordinary wild type stock X chromosomes have significant RD activity.

Table 1: Percentage of females obtained from individual tests of males containing X chromosomes from the ordinary wild type stocks listed.

Oregon R	Swedish C	Urbana S	Canton S	Control (RD)
60.4	63.0	53.3	53.7	65.2
65.0	63.0	54.1	50.8	70.1
57.6	64.0	53.1	52.4	65.0
65.2	65.5	51.6	50.4	67.1
62.9	66.7	50.0	48.0	67.6
61.3	62.0	51.2	50.6	67.9
64.4	69.6	51.6	49.6	63.9
60.1	68.5	51.6	53.3	68.2
62.5	65.3	54.0	50.8	
61.4	62.8	53.3	53.9	
$\bar{X}$ = 62.1	$\bar{X}$ = 65.0	$\bar{X}$ = 52.4	$\bar{X}$ = 51.4	$\bar{X}$ = 66.9
n = 10	n = 10	n = 10	n = 10	n = 8

Hanks, G. D. University of Utah, Salt Lake City, Utah. Rate of recovery of products from nondisjunction of the 4th chromosmme in RD strain males.

Since Erickson (1965) found cytological nondisjunction of the 2nd or 3rd chromosomes to be 7.3% of the cells resulting from the first meiotic division, and Erickson (personal communication) states that his cytological work suggests that the 4 is rather often nondisjunctional, it would seem to be of interest to compare the rate of genetic recovery of nullo-4 gametes. Males heterozygous for a stock 4th chromosome marked with ci ey^R or ey were mated to three spa^{pol} females. Nullo-4 gametes from the male would be recovered as sparkling polished progeny. Progeny were classified as to sex and the sparkling polished phenotype. In a total of 13,699 progeny 10 were sparkling polished and the grand mean percentage of females was 63.6%. The frequency of Haplo-4 males is only slightly greater than the 1 in 2000 reported by Morgan, Bridges, and Sturtevant (1925). Perhaps there is a mechanism that provides for selection against recovery of unbalanced gametes with respect to some autosomes at least.

References: Morgan, T. H., C. B. Bridges, and A. H. Sturtevant. 1925 The Genetics of Drosophila. Martinus Nijhoff, The Hague p. 140.
Erickson, John 1965 Genetics 51: 555-571.

Hanks, G. D. and S. Kimberling. University of Utah, Salt Lake City, Utah. Rate of recovery of nullo-XY sperm from males carrying the sc^8 Y with and without RD autosomal background.

Single males with the sc^8Y (marked with y^+) and with RD background including the X were mated to five y v females. 100 yv exceptional males were scored in a total of 2500 male progeny (4%). The percentage female value was 60.3. The controls were performed by mating males carrying the sc^8Y and an ordinary stock X without RD autosomal background to five y v females. Only 11 y v males were recovered in 7,972 male progeny (0.138%). This is compelling evidence that nondisjunction of the sex chromosomes has a genetic component in either the X or the autosomes or both.