Why Cochran - Mantel - Haenszel doesn't work:

$$\xi_{CMH} := \frac{\left[\sum_{i=1}^{k} \left(A_i - \frac{N_{1i} M_{1i}}{T_i} \right) \right]^2}{\sum_{i=1}^{k} \frac{N_{1i} N_{2i} M_{1i} M_{2i}}{T_i^2 (T_i - 1)}}$$

where for each category $i < k$ the contingency table has entries

			ROW SUM
	A_i	B_i	N_{1i}
	C_i	D_i	N_{2i}
COL SUM	M_{1i}	M_{2i}	T_i ← TOTAL OBS. IN CATEGORY i

COUNTER EX.

FREQ. MATRIX FOR POP 1:

	B	b
A	$1/2$	$1/4$
a	$1/6$	$1/12$

FREQ. MATRIX FOR POP 2:

	B	b
A	$1/4$	$1/4$
a	$1/4$	$1/4$

$\Rightarrow \xi_{CMH} = 0$ BUT WE'RE NOT IN EQUILIBRIUM.