



**Figure S1. Identity coefficients of HapMap couples using original methods and phased genotypes.** Plots are based on phased genotypes, SNPs with  $MAF \geq 5\%$ , and  $het-het=50\%$ . Results are similar to those obtained with modified methods, and reveal only minor differences between mates and non-mates. Refer Supporting Table 1 in Text S1 for differences in sample sizes of Phase 3 phased and unphased data. Autosomal identity coefficients were lower in Phase 3 because fewer SNPs with low minor allele frequencies were genotyped.