

ANALYSIS OF NEW FACTORS AND NEW SYSTEMS

1. **Trial absorptions** to disclose:
  - a. normal antibodies.
  - b. unexpected antibodies like D'.
  - c. fractionation of the "expected" possible specificities, if some blood types are already developed.
2. **Replicate comparisons** of
  - a. parallel patterns, single or simple.
  - b. parallel patterns, combinations of known patterns  
e.g.  $M_1 + Y_1Y_1$  (some are confusing).  
(Caution: a parallel series of reactions does not always mean equality. cf: the  $U_2 - U'$  model.)
3. **Subtypes** (asymmetrical patterns) always include the 2 reagent specificities in the same genetic system.  
difficult examples: Z' with A (one too rare)  
H' with S (one too common)
4. **Phenogroup associations:** for example:  
G'factor is always with B28,  $BO_2Y_1A'E'_3G'$ , and  $O_xD'E'_3F'G'O'$ .

But others split! for example F', G', and O' with  $O_xE'_3$  yields

$O_x E'_3$   
 $O_x E'_3 G'$   
 $O_x E'_3 O'$   
 $O_x E'_3 G'O'$   
 $O_x E'_3 F'O'$   
 $O_x E'_3 F'G'O'$

5. **Family data:** especially sire families in cattle.
6. **Population data:**
  - a. Hardy-Weinberg  $X^2$  test as with MN & R'S'
  - b. 2 x 2 contingency tables with  $X^2$   
(Beware of pseudo-associations stemming from homozygous bulls, etc.; i.e. is the sample truly random?)
7. **More elaborate stastical tests:** e.g. Lod scores.