

Distal-proximal approaches to aggression: A rejoinder to Campbell, Muncer & Bibel

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Both consistency and variability exist in behaviour. While those who focus on inter-individual differences accept that there is also intra-individual variation, the opposite appears to be less true. A time continuum of levels of explanation is offered, and a recent adoption study corroborates the heritability of aggression.

That an individual's aggression varies from situation to situation has never been in question. The issue raised was whether individual differences are consistent enough to validate trait theory (Rushton & Erdle, 1987). When a correlation is calculated between only two instances of aggression, the result is usually judged to be too low to support the trait concept. What Erdle and I demonstrated is that when particulars are cumulated, correlations substantially increase and group differences (age, sex, socio-economic status) emerge more clearly. The conclusion regarding the existence of a trait of aggression that emerges from analyses based on individual and aggregate exemplars is completely different.

Campbell *et al.* (1987) obfuscate this pivotal point by arguing that aggregating over distinct items results in a loss of focus on situationally determined intra-individual variation. A preference for proximal explanations, however, ought not to exclude other perspectives. Consider Fig. 1 in which accounts vary on a time dimension. As explanations move from distal to proximal, controversy does not ensue. Evolutionary biologists do not find the heritability of traits problematic, trait theorists accept that dispositions are modified by later learning, and learning theorists believe that the products of early experiences interact with subsequent situations to produce emotional arousal and cognition. As Campbell *et al.*'s reply illustrates, resistance increases as explanations move from proximal to distal. Thus some phenomenologists mistrust the reduction that consciousness is partly the result of previous learning. Situationists and learning theorists do not always accept that people's choices and development may be guided by inherited traits. Often behaviour geneticists ignore evolutionary history.

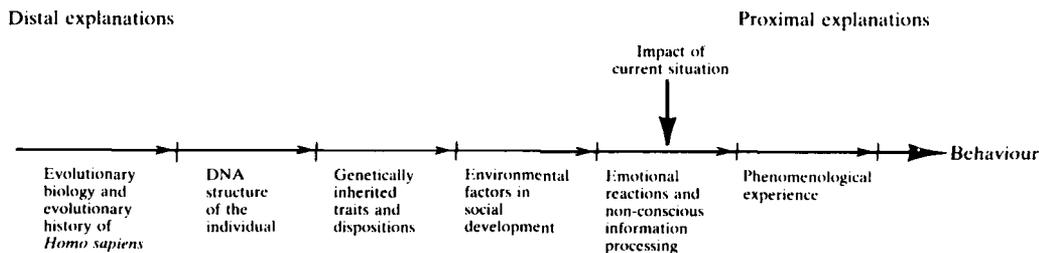


Figure 1. The distal-proximal dimension and levels of explanation in social behaviour.

Aggression can be examined from each level, and both consistency and specificity shown to exist. Situationally induced moods, for example, are known to alter people's altruism and aggression (Rushton, 1980). Using aggregation, people can also be shown to differ in average mood state (Epstein, 1979). The question of what to aggregate can only be answered by construct validity research. All aggregates will not be useful for all purposes, but it must be emphasized that the benefits are not artificial, nor specific to particular types of item. Campbell *et al.* should have aggregated their own situationally specific response formats and related the scores to the sex and SES of their subjects to discover if this is not the case. The methodological point is entirely general. In a behavioural mode, for example, Eaton (1983) assessed differences in activity level in three- and four-year-olds using single vs. multiple actometers attached to the children's wrists as predictors, and teachers' and parents' ratings as criterion. Single actometers correlated 0.33 with the ratings, while scores based on multiple actometers correlated 0.69.

Campbell *et al.* (1987) suggest that longitudinal stability can be expected from a situationalist perspective. But in the cited study by Huesmann *et al.* (1984), aggression was measured at age eight by peer ratings, at age 30 by self-report questionnaires, and law-abidingness by legal convictions, child and spouse abuse and traffic violations. It is unclear how these observations can be explained by situationalism. In accord with the view being presented here, however, it should be noted that longitudinal studies typically use aggregate measures (many peer ratings, numerous items on self-report questionnaires, several exemplars of antisocial behaviour). This fact should give pause for thought: critiques of trait theory, paradoxically examining cross-situational consistency at the item level, but longitudinal and intellectual consistency in the aggregate, commit egregious error.

Aggression and crime show similarity in that social rules are broken and others are harmed. In Mednick, Gabrielli & Hutchings' (1984) adoption study, a genetic component was found for crime generally, but not for violent crime specifically. Mednick, Moffit, Gabrielli & Hutchings (1986) suggest this may have been due to the low base-rate for violence in Denmark. Clearer evidence for the genetic basis of aggression comes from a study by Tellegan *et al.* (in press) who uniquely combined both adoption and twin methodologies to produce heritability estimates very similar to those cited in my earlier paper. A complete understanding of aggression, therefore, will require a specification of the developmental processes by which various genetic effects combine with other influences to produce behaviour (Rushton *et al.*, 1986). Such understanding will not be facilitated by a narrow focus on proximate causation.

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References

- Campbell, A., Muncer, S. & Bibel, D. (1987). For disaggregation: A reply to Rushton & Erdle. *British Journal of Social Psychology*, *26*, 90–92.
- Eaton, W. O. (1983). Measuring activity level with actometers: Reliability, validity, and arm length. *Child Development*, *54*, 720–726.
- Epstein, S. (1979). The stability of behavior: I. On predicting most of the people much of the time. *Journal of Personality and Social Psychology*, *37*, 1097–1126.
- Huesmann, L. R., Eron, L. D., Lefkowitz, M. M. & Walder, I. O. (1984). Stability of aggression over time and generations. *Developmental Psychology*, *20*, 1120–1134.
- Mednick, S. A., Gabrielli, W. F. & Hutchings, B. (1984). Genetic influences in criminal convictions: Evidence from an adoption cohort. *Science*, *224*, 891–894.
- Mednick, S. A., Moffit, T., Gabrielli, W. & Hutchings, B. (1986). Genetic factors in criminal behavior: A review. In D. Olweus, J. Block & M. Radke-Yarrow (eds), *Development of Antisocial and Prosocial Behavior: Research, Theories, and Issues*. Orlando, FL: Academic Press.
- Rushton, J. P. (1980). *Altruism, Socialization, and Society*. Englewood Cliffs, NJ: Prentice-Hall.
- Rushton, J. P. & Erdle, S. (1987). Evidence for an aggressive (and delinquent) personality. *British Journal of Social Psychology*, *26*, 87–89.
- Rushton, J. P., Littlefield, C. H. & Lumsden, C. J. (1986). Gene–culture coevolution of complex social behavior: Human altruism and mate choice. *Proceedings of the National Academy of Sciences of the United States of America*, *83*, 7340–7343.
- Tellegan, A., Lykken, D. T., Bouchard, T. J. Jr, Wilcox, K., Segal, N. & Rich, S. (in press). Personality similarity in twins reared apart and together. *Journal of Personality and Social Psychology*.

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