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Debate

RESPONSE TO REHMAN *ET AL.* (2015)

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In academic debates it is customary for authors to acknowledge errors of interpretation, unwitting or otherwise. Accompanying apologies also commonly are offered to researchers whose work has been mis-quoted. It therefore is somewhat puzzling and disappointing that Rehman *et al.* have opted not to follow this tradition and instead have ignored the original mistake by Ahmad *et al.* (2015) (corresponding author: S. Malik), and have chosen to make additional, entirely unsubstantiated and erroneous claims.

For example, without supporting evidence they refer to the 66.4% consanguineous marriage ($\alpha = 0.0338$) reported for the Malakand region of Khyber Pakhtunkhwa province, Pakistan (formerly the North West Frontier province) as 'exaggerated', and further state that '…such a high rate of consanguineous union has never been witnessed in any Pakistani population'. By any standards this is a sweeping and conclusive statement. More importantly, it is patently untrue.

Besides the 77.6% ($F = 0.0539$) consanguinity recently reported among landowners in Sargodha district, Punjab (Hina & Malik, 2014; corresponding author S. Malik), we would particularly refer Rehman *et al.* (corresponding author S. Malik) to the prospective investigation by Hashmi (1997) based on interviews with 5000 consecutive Pakistan Armed Forces' families. In this study 73.1% of marriages were between couples related as first or second cousins, comprising 62.5% first cousin and 10.6% second cousin unions, equivalent to a mean coefficient of inbreeding (α) of 0.0407. It is difficult to comprehend how Rehman *et al.* could have overlooked either of these references, the latter of which is well cited, and their apparent inability to undertake a straightforward literature search is scarcely indicative of rigorous investigative scholarship.

Perhaps in keeping with the motto 'Attack is the best means of defence', Rehman *et al*. also have questioned and disparaged the internationally renowned Demographic and Health Surveys (DHS), established in 1984 and with over 260 health-based surveys

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conducted to date in more than 90 countries. The DHS are nationally representative and internationally comparable household-based surveys, with core questionnaires administered on a wide range of population and health topics. Three DHS have been conducted in Pakistan by the National Institute of Population Studies (NIPS) in collaboration with Macro International/ICF International in the USA (Sthanadar *et al*., 2015). Given the quality and representative nature of the information collected, DHS data have been very widely adopted in national and international academic studies (Corsi *et al*., 2012; Fabic *et al*., 2012).

For some reason or reasons known only to themselves Rehman *et al.* repeatedly, and without foundation, describe the DHS findings as 'census data of Pakistan', which is totally incorrect. They would have been well-advised to properly investigate the globally established questionnaire methodologies used by the highly trained NIPS staff, and where appropriate to have followed their interview protocols, especially when Ahmad *et al*. (2015) relied exclusively on male respondents recruited by 'convenience sampling' in 'public places' to elicit personal, family and household information. Given this method of recruitment it is unsurprising that both the response and consent rates were 'low' (no further information provided), and it is moot whether data collected under such circumstances would or could be representative of the Bajaur study population. Indeed, as acknowledged by Ahmad *et al*. (2015), '…the sample is only representative of the male population from public places and *hujras*' (i.e. communal meeting places for males): not the types of venue where detailed information of a sensitive personal and family nature usually is sought or exchanged between study subjects and researchers.

Perhaps the most intriguing aspect of the response by Rehman *et al.* is that their newly revealed data from Lower Dir district convincingly demonstrate a marked increase in the prevalence of consanguineous marriages from 2000 onwards, subsequent to the onset of Taliban hostilities in Afghanistan and north-west Pakistan, which mirrors the increase in consanguinity we had reported in Malakand and ascribed to the desire for enhanced family security in reaction to intense levels of civil insurrection (Bittles, 2012; Sthanadar *et al*., 2014). In terms of data consistency, it is especially significant that the increase in consanguineous marriage in Lower Dir post-2000 (Rehman *et al*., 2015) also is entirely contrary to the findings reported by Ahmad *et al*. (2015) in the geographically adjacent Bajaur Agency.

Yet curiously, in discussing their Lower Dir data (for which no details are provided on numbers or sampling procedures), Rehman *et al.* singularly fail to draw any parallels with the positive shift in consanguinity that we had previously described in Malakand. Instead they ponder at length, and once again without supporting evidence, on the '… notion …' of between-population differences in marriage customs. Such local differences may well exist, but could they really explain the strikingly contradictory findings in Bajaur and neighbouring Lower Dir?

We strongly reiterate our belief that the elevated current rate of consanguineous marriage in Malakand has occurred in response to recent high rates of civil violence (Sthanadar *et al*., 2014). As illustrated in Table 2 of Sthanadar *et al*. (2015), our data are consistent with and supported by the results of the independent and representative DHS conducted more widely in Khyber Pakhtunkhwa province during 1990/91, 2007/07 and 2012/13, suggesting a quite generalized shift in marriage preference in north-west

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Pakistan. Although now apparently in synchrony with our findings in Malakand, the narrative offered by Rehman *et al.* speaks more of hubris and bluster than experimental forethought, while their apparent unwillingness to shoulder responsibility for serious interpretive errors of their own making does little to enhance their academic credibility.

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