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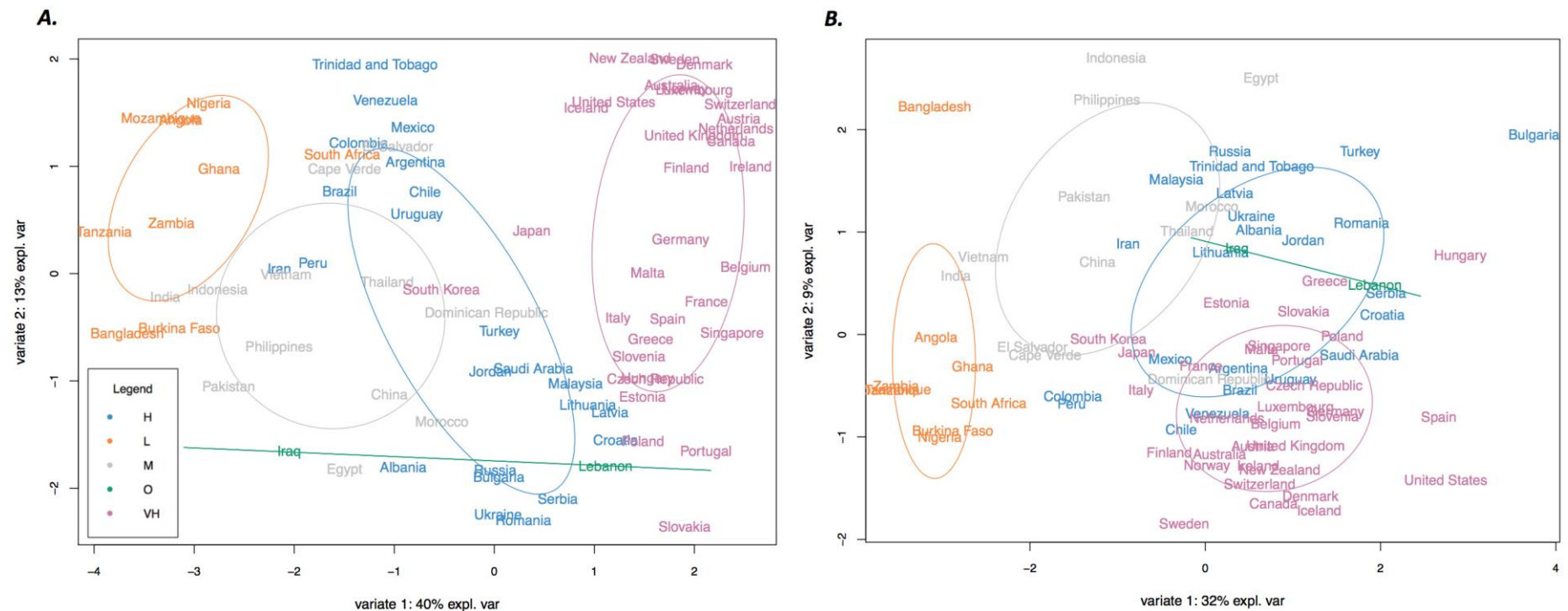


Figure 1. Sparse generalized canonical correlation analysis (SGCCA) reveals interesting patterns in the two data sets (response and explanatory). The first component (i.e., variate 1) differentiated the countries clearly based on their state of development (see legend) whether by (A.) social variables (i.e., explanatory), or by (B.) health variables (i.e., response). Positive variate 1 social scores indicate increasing Information Flow, Social Globalization, Personal Contact, Cultural Proximity, whereas negative variate 1 scores indicate increasing Gender Inequality. Positive variate 2 social scores indicate increasing Indulgence versus restraint, National Happiness, Gross Domestic Product, Religious Diversity and Individualism, whereas negative variate 2 social scores indicate increasing Power Distance. Positive variate 1 health scores indicate increasing addictive behaviors (specifically, MBody15YLD, FTobacco15YLD, FTobacco15DALY, MBody15DALY, FBody15YLD, FDrug.15DALY, and MDrug15DALY), whereas negative variate 1 health scores indicate decreasing of the above addictive behaviors. Positive variate 2 health scores indicate increasing male tobacco overall disease burden (i.e., MTobacco15DALY, and MTobacco15YLD), and both male and female body image issues (i.e., FBodyIndex15DALY, MBody15DALY, and FBody15YLD), whereas negative variate 2 scores indicate increasing female alcohol and tobacco years lived with the disability (i.e., FAlcohol15YLD, and FTobacco15YLD). Ellipses represent 95% confidence regions. H = highly developed, L = less developed, M = moderately developed, O = not designated by databases, VH = very highly developed.

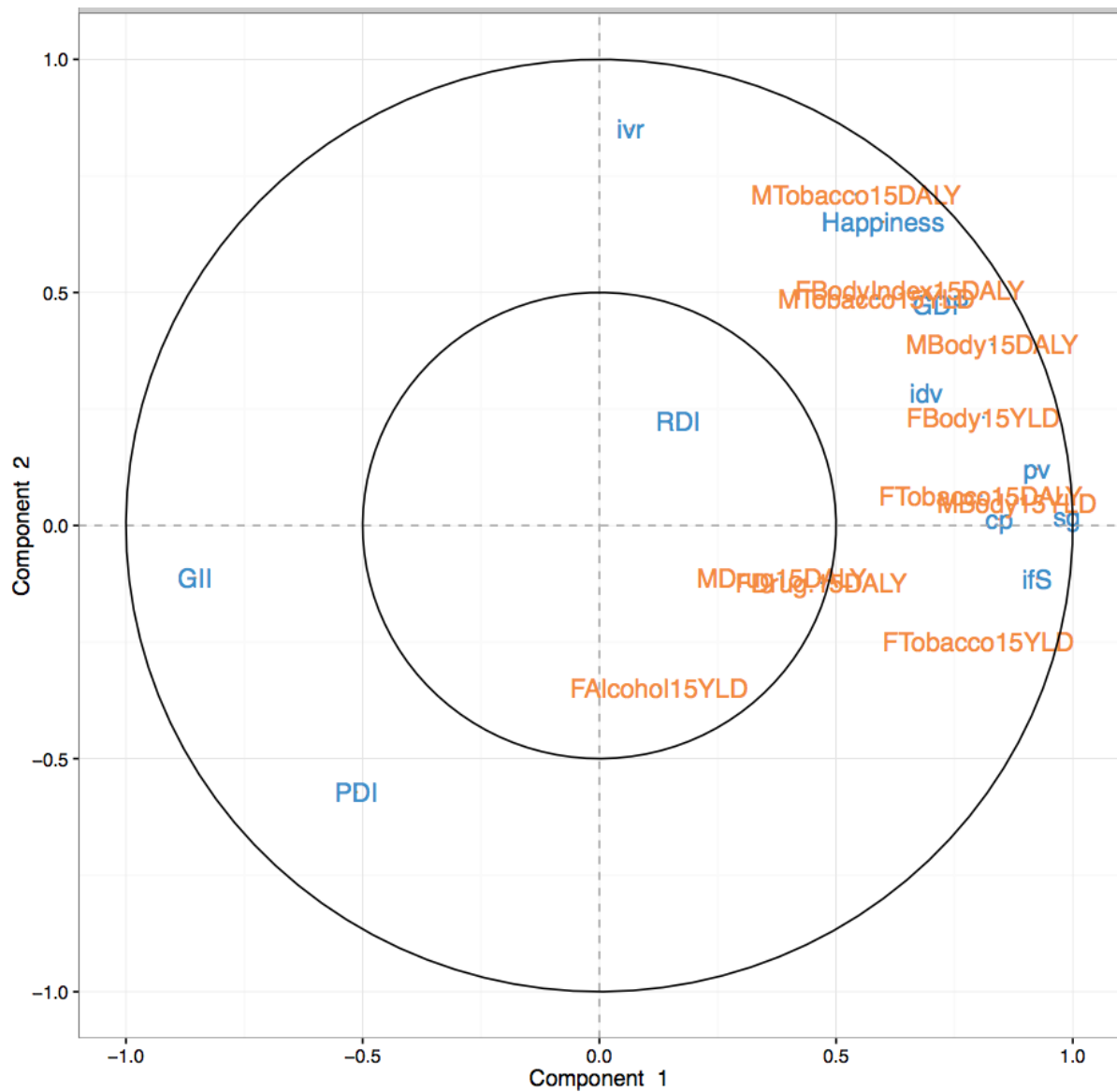


Figure 2. Correlation plot showing which response variables (in orange) are correlated with which explanatory variables (in blue) by looking at formed clusters as defined by the first two components from the sparse generalized canonical correlation analysis. Clustering of variables also indicate their correlations between them. The distance from the origin represents the strength of the correlation (the further from the origin the better). The correlation circle plot also highlights the contribution (absolute scores) of each selected variable to each component (variate). From the biplot, positive Component 1 scores indicate increasing Information Flow (ifS), Social Globalization (sg), Personal Contact (pv), Cultural Proximity (cp), whereas negative Component 1 scores indicate increasing Gender Inequality (GII). Positive Component 2 scores indicate increasing Indulgence versus restraint (ivr), National Happiness (Happiness), Gross Domestic Product (GDP), Religious Diversity (RDI) and Individualism (idv), whereas negative Component 2 scores indicate increasing Power Distance (PDI). Additive behavior variable abbreviations are listed in the paper.