



**Supplemental Figure 2:** Path diagram of the reduced Independent Pathway model. Paths estimates are expressed as the proportion of variance accounted for by common or specific etiological factors. For callous-unemotional, 15% of overall genetic influences are due to shared factors and 85% due to trait specific factors. For social interaction, 26% of overall genetic influences are due to shared factors and 74% due to trait specific factors. For social communication, 39% of overall genetic influences are due to shared factors and 61% due to trait specific factors. Dotted arrows indicate a non-significant path estimate.  $A_c$  = common genetic factors;  $E_c$  = common non shared environmental factors;  $A_s$  = specific genetic factors;  $C_s$  = specific shared environmental factors;  $E_s$  = specific non shared environmental factors.  $h^2$  = proportion of variance on the trait explained by additive genetic influences;  $c^2$  = proportion of variance explained by shared environmental influences;  $e^2$  = proportion of variance explained by non-shared environmental influences.