R Code for Calculating the Relative Importance of Each Component in a PD Observed Score

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First, read in the following function by running the following lines.

```r
# function for calculating amount of relative variance (no need to modify)
relvar <- function(c1, c2, c3, c4){
  tot <- c1+c2+c3+c4
  rv1 <- round(c1/tot*100,2)
  rv2 <- round(c2/tot*100,2)
  rv3 <- round(c3/tot*100,2)
  rv4 <- round(c4/tot*100,2)
  cat("% of variance explained by", deparse(substitute(c1)), " = ",rv1,
      "\n% of variance explained by", deparse(substitute(c2)), " = ",rv2,
      "\n% of variance explained by", deparse(substitute(c3)), " = ",rv3,
      "\n% of variance explained by", deparse(substitute(c4)), " = ",rv4)
}
```

Now, this function can be used to calculate the relative importance of each PD SRM component in a purely dyadic (observed) score. First, specify the estimated variance of each component (you can find this in the lavaan output under the header "Variances")

Legend:

- fam = family component
- i = individual component
- d = dyadic component
- roles: mo = mother; fa = father; oc = oldest child; yc = youngest child.

```r
# Estimated variance of each component
  fam <- 0.473
  i.mo <- 0.129
  i.fa <- 0.417
  i.oc <- 0.099
  i.yc <- 0
  d.mofa <- 0.261
  d.mooc <- 0.168
  d.moyc <- 0.063
  d.faoc <- 0.045
  d.fayc <- 0.094
  d.ycoc <- 0.473
```

Than, tell R by which components the PD scores are defined. For example, as can be seen in Figure 3 of the manuscript. The PD score of the mother-father dyad is a function of the family component, the individual component of the mother, the individual component of the father and the mother-father dyadic component.

```r
# mother-father PD score
  relvar(c1 = fam, c2 = i.mo, c3 = i.fa, c4 = d.mofa)
```

```
## % of variance explained by fam  =  36.95
## % of variance explained by i.mo  =  10.08
## % of variance explained by i.fa  =  32.58
```

```
## % of variance explained by d.mofa  =   20.39
```

```r
# mother-oldest child PD score
  relvar(c1 = fam, c2 = i.mo, c3 = i.oc, c4 = d.mooc)
```

```
## % of variance explained by fam   =   54.43
## % of variance explained by i.mo  =   14.84
## % of variance explained by i.oc  =   11.39
## % of variance explained by d.mooc =   19.33
```

```r
# mother-youngest child PD score
  relvar(c1 = fam, c2 = i.mo, c3 = i.yc, c4 = d.moyc)
```

```
## % of variance explained by fam   =   71.13
## % of variance explained by i.mo  =   19.4
## % of variance explained by i.yc  =    0
## % of variance explained by d.moyc =   9.47
```

```r
# father-oldest child PD score
  relvar(c1 = fam, c2 = i.fa, c3 = i.oc, c4 = d.faoc)
```

```
## % of variance explained by fam   =   45.74
## % of variance explained by i.fa  =   40.33
## % of variance explained by i.oc  =   9.57
## % of variance explained by d.faoc =   4.35
```

```r
# father-youngest child PD score
  relvar(c1 = fam, c2 = i.fa, c3 = i.yc, c4 = d.fayc)
```

```
## % of variance explained by fam   =   48.07
## % of variance explained by i.fa  =   42.38
## % of variance explained by i.yc  =    0
## % of variance explained by d.fayc =   9.55
```

```r
# youngest-oldest child PD score
  relvar(c1 = fam, c2 = i.yc, c3 = i.oc, c4 = d.ycoc)
```

```
## % of variance explained by fam   =   45.26
## % of variance explained by i.yc  =    0
## % of variance explained by i.oc  =   9.47
## % of variance explained by d.ycoc =   45.26
```