NOTIONS OF INTRINSIC GRATITUDE

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This note will not introduce any scientific advances or report on any new studies. It is August 21 2021, and I am interested these days in Optimism and Gratitude. I am writing this note in response to getting clear correlation of Gratitude with 30 facets of Personality. I am interested in natural *intrinsic measures of gratitude* and consider its value for the Global Life Satisfaction project.

We want to consider this measure because I think it is analytically valuable for our project of Global Life Satisfaction. We consider an exceedingly simple measure of intrinsic gratitude.

Suppose G is the gratitude variable, and let $F_1, \ldots, F_{30}$ be the 30 facets of Personality. Let

$$r_k = \langle G, F_k \rangle$$

Now consider the measure

$$g = \sum_{k=1}^{30} F_k sign(r_k) |r_k - s|$$

where $s = 0.1$. This is the rough idea. It is that we ought to soft-threshold the correlations toward zero which will kill noise in correlations and then we should just sum the correlations to produce an intrinsic gratitude for a person. At the moment the threshold $s = 0.1$ is arbitrary but it should reflect our estimate of significant correlations. This sort of measure g can then be considered the intrinsic personality-invariant Gratitude level of a person. Then we can consider how actual gratitude has decomposition

$$g_{tot} = g + g_{env}$$

Here the idea is g_{env} or environment induced gratitude can be changed so affect total gratitude g_{tot}. Then this g_{tot} has direct effects on Life Satisfaction.

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1. Known Correlations

Table 2

Correlations between gratitude and the 30 facets of the Big Five.

	Wood et al. (2008)	Wood and Joseph et al. (2009)
N1: Anxiety	−.02	−.03
N2: Anger hostility	−.18*	−.20**
N3: Depression	−.13*	−.31***
N4: Self-consciousness	−.08	−.12
N5: Impulsiveness	.11*	.02
N6: Vulnerability	−.14**	−.27***
E1: Warmth	.34***	.44***
E2: Gregariousness	.26***	.26***
E3: Assertiveness	.10	.16*
E4: Activity	.12*	.24***
E5: Excitement seeking	.11*	.12
E6: Positive emotions	.43***	.51***
O1: Fantasy	.15**	.13
O2: Aesthetics	.19**	.01
O3: Feelings	.14**	.33***
O4: Actions	.23***	.03
O5: Ideas	.16**	.15*
O6: Values	.13*	.18*
A1: Trust	.31***	.26***
A2: Straightforwardness	.09	.17*
A3: Altruism	.26***	.40***
A4: Compliance	.11*	.06
A5: Modesty	.06	.02
A6: Tender-mindedness	.30***	.18*
C1: Competence	.16**	.24**
C2: Order	.01	.055
C3: Dutifulness	.15**	.28***
C4: Achievement striving	.15**	.20**
C5: Self-discipline	.03	.27***
C6: Deliberation	.01	−.04

Note: results summarized from two previous studies (Wood, Joseph et al., 2008; Wood, Joseph, & Maltby, 2009).
* $p<.05$, ** $p<.01$, *** $p<.001$.

2. Conclusion

We are introducing a novel measure of *intrinsic gratitude* for any human being based on correlations measured by Wood et. al. [1].

References

[1] Wood, A. M., Joseph, S., & Maltby, J. (2008). Gratitude uniquely predicts satisfaction with life: Incremental validity above the domains and facets of the five factor model.Personality and Individual Differences,45, 49–54.