

I j b b Vgn

) , C>LHAY > An ELA A>H L^%o->S¥ "L%o
EL HLCL , ...> %o Bp>%oB , ... } S%o , ~>n , ^spj
"p>" L^%o , S%o...>S E S%o sYL sp , , H %oYB^YL " ,
%B>L , ^Hs> N^B , ^ } , HL %o , >nL H>">%o%

I J Z 8^ <kZ FZghdcVa^n i Zhi

- >nL %B>L ELA A>H "L%oHL%o~LH" ,
} L>%oL ..L^%o->S¥ >L>%o * LY^ , B\$
* n^LL>A L~L%o fl^>CL^%o~ fl
..L~L%o , L^L^L~BL , >-H
^ , ~%oL~ , Y%oL%o
- fl>Bp >L>B> AL N^"pL^%oS s ..L^%o->S¥
N^BL^%oN^> , "> , N } Y"> ¥B ^L>LH
>"L~" ^>S%o , >BB , Y~" N^
- 5pL H>">%o B ~%o%oN>~%oL^%o ,
sL} %o~>TCL B>Ln , ^¥^> -n %B>L
 , A%o^CLH , ~ } , ^L "p>~ "p , Y%o-H%Y~S%o

FV^g hZ B^ Za] ddY

5pL ...>S E S%o , n sYL sp , , H %B ~%oYB^LHL^
... s -n "pL Y~HL^ ¥s-n^L%o ~%oC>^sAL ..> }
L^L^%o , ~ E sp

$$p() = \prod_{j < j} jj() = \prod_{j < j} n_{s_j s_j}^{j j} \log \frac{j j}{s_j s_j}$$

E pL^L n_{s_j s_j}^{j j} %o pL , A%o^CLH NL^YL~B¥ , N^pL
%oL B^B A^s^>^s^L ..^TM^~ , ~ B , Y} ~%o^j , j E psl
s%o^>ns> ^ , A>Ass¥ S%oBLT~LH>%o

$$\frac{j j}{s_j s_j} = \int_{s_j-1}^{s_j} 2(Y_j, Y_j; \frac{y_j}{j j}) dy_j dy_j;$$

E pL^L \frac{y_j}{j j} S%o pL } , HL B ^L > , ~AL^ELL~C>^s
>AL%o^>-Hj B } ..Y^LH C> \int u j

/^ , %o^HB , ~%o

" %A%o^Y^L%o^>nL Hs L~%o-> s^Ln^> , ~
... , AL } %E sp A^>^s^L , ~L%o

" ^LH^YBL%b^> A¥ %o} B^L~B¥

" %B } ..Y"> , ~> B , %on^ , E %E sp O(p^2)

: ZiV^hdc i] Z J cYZgn^c\ g^hedchZ
kVgVW^Z IJ HKZeVg/b ZiZghVi dC

^ %o} ... , ~%o

, ^Hs> ^L%o ~%o%oY_j = s_j {0, ..., c_j - 1}
/ >^>L ..> , A%o^C> , ~ , N>~ Y~HL^ ¥s-n
^L%o ~%o~ , ^ } > ¥Hs%o^AY^LH y %oBp "p>"

$$Y_j = s_j \int_{s_j-1}^{(j)} < y_j < \int_{s_j}^{(j)}$$

>-Hy = u + E sp = I_p - Hs-n(u^T)
>-H N_p(0,)

/>^> L^L^%o

- >Hs-n } >^s^> >"L~" B , ^L > , ~ } >^s^ u
>-H "p^L%o H%o^L B , ^ E pL^L
= ((1)^T , ... , (p)^T)^T E sp
(j) = ((j) , ... , (c_j-2)) N^{c_j-1}

• R^d B , LB^%o^>} L^L^%o , } u >-H

&syL sp , , H

5pL H>">} >^ns> sYL sp , , H S%o^sL~A¥

$$(; y) = \prod_{j=1}^n \int_{s_1-1}^{(1)} \int_{s_p-1}^{(p)} p(y_j; y) dy_j$$

E pL^L p(x;) S%o pL HL~%o¥ , N>p Hs L~%o~>
~ , ^ } > Hs%o^AY , ~ L C>Y>"LH>" x E sp } L>~
^L^ , >-H C>^s~BL

Ddi Vi dC

- n Y~S%o^p , A%o^CLH sL } %o^q >"L~" C>^sAL%o
- 2>-H , } n x p } >^s^ , N } >^sL%oC>^sAL%o^ E sp
Y_i = (Y_{i1}, ..., Y_{ip}) R^p N^i = 1, ..., n 2L>S> , ~%o
y E sp y_i = (y_{i1}, ..., y_{ip}) R^p
- 2>-H , } n x q } >^s^ , N >"L~" C>^sAL%o^ E sp
U_i = (U_{i1}, ..., U_{iq}) R^q N^i = 1, ..., n
2L>S> , ~%o E sp u_i = (u_{i1}, ..., u_{iq}) R^q >-H
u_i iid N_q(0, u)
- >"L~" B C>^s~BL } >^s^ u R^q x R^q
^ , ~%o^s~LH" , AL >B , ^L > , ~ } >^s^
- >Hs-n } >^s^ = (T_1 , ... , T_p) R^p x R^q E sp
j = (j_1 , ... , j_q) j = 1, ..., p.

i idX] Vhi X E ei b hVi dC

- / LT~L >%o Bp>%oB >...^ , s^> , ~ , "pL n^>H^L~"
C>S
p(, y) f(; y, w) = \prod_{j < j} w_{jj}^{-1} jj() .

• 5pL ^Y>~ L%o w_{jj} >"L~" >-H , } As>^¥ E Lsnp "%o^Bp
"p>" w_{jj} iid L^~ , Y^ ()

• * , "L "p>" sN = 1 E L "L^L^CL
f(; y, w) = p() N = 1 E L %o p>CL
E_w{ f(; y, w) } = p()

5pL >n , ^spj

5pL nL~L^sB t "p L.. Bp >"L~">L%o

3" , Bp>%oB %b... 3> } ..L >~LE %o , NE Lsnp "%o^L^
^...^ , s^> , ~%b... ^ , } ..Y^L f(t-1; y, w^L^)

7..H>"L %b... 7..H>"L t C>S
t = t-1 + p t f(t-1; y, w^L^) E pL^L t = t-5+
%oBp "p>" t=1 t = >-H t=1 t^2 <

" "pL L~H , N^pL p ... } s^> , ~ ">WB^ , ^L%o^L >CL^
>nLH C>S = T^{-1} \frac{T}{t t}

C V^c <^Y^c\h

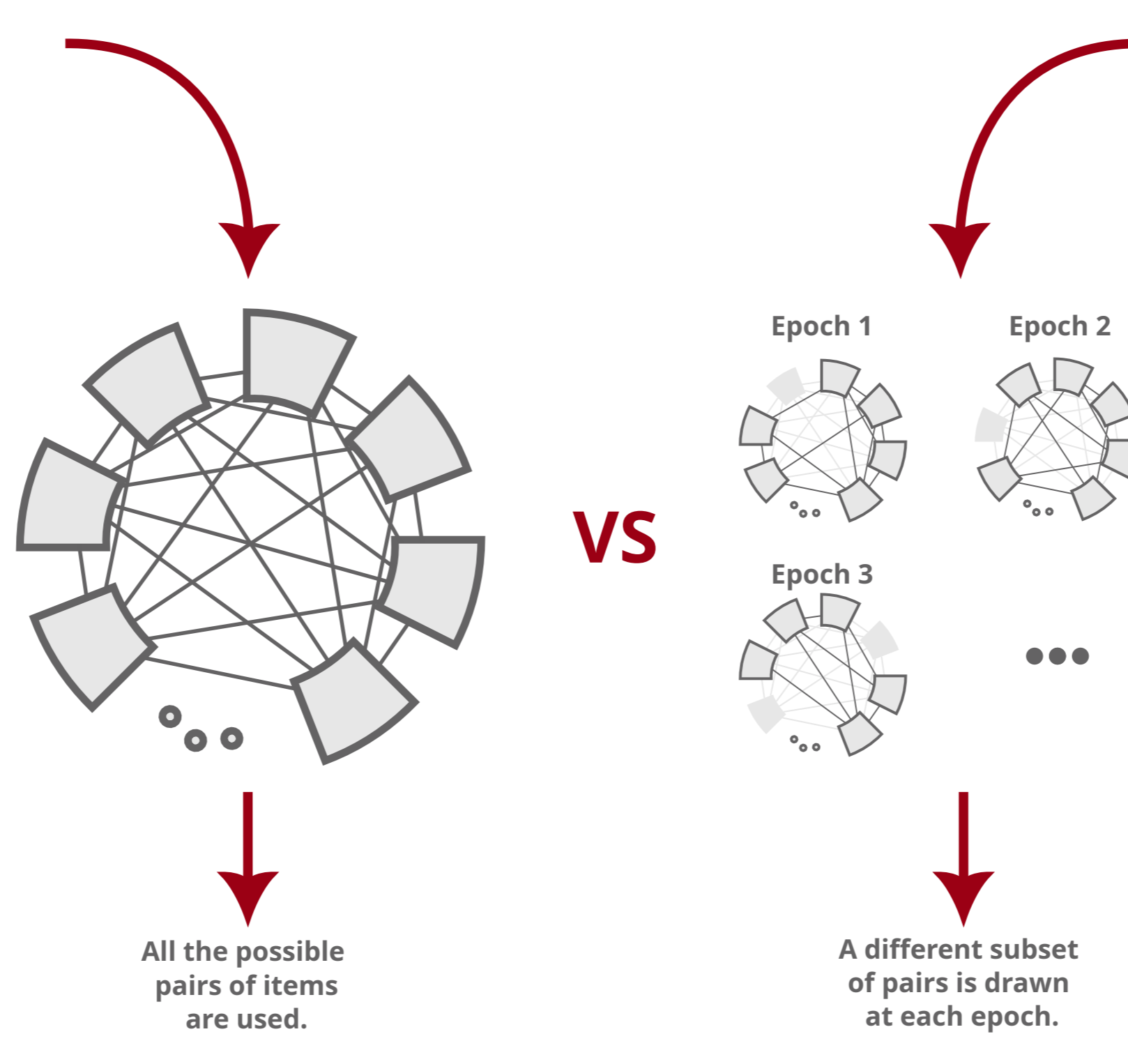
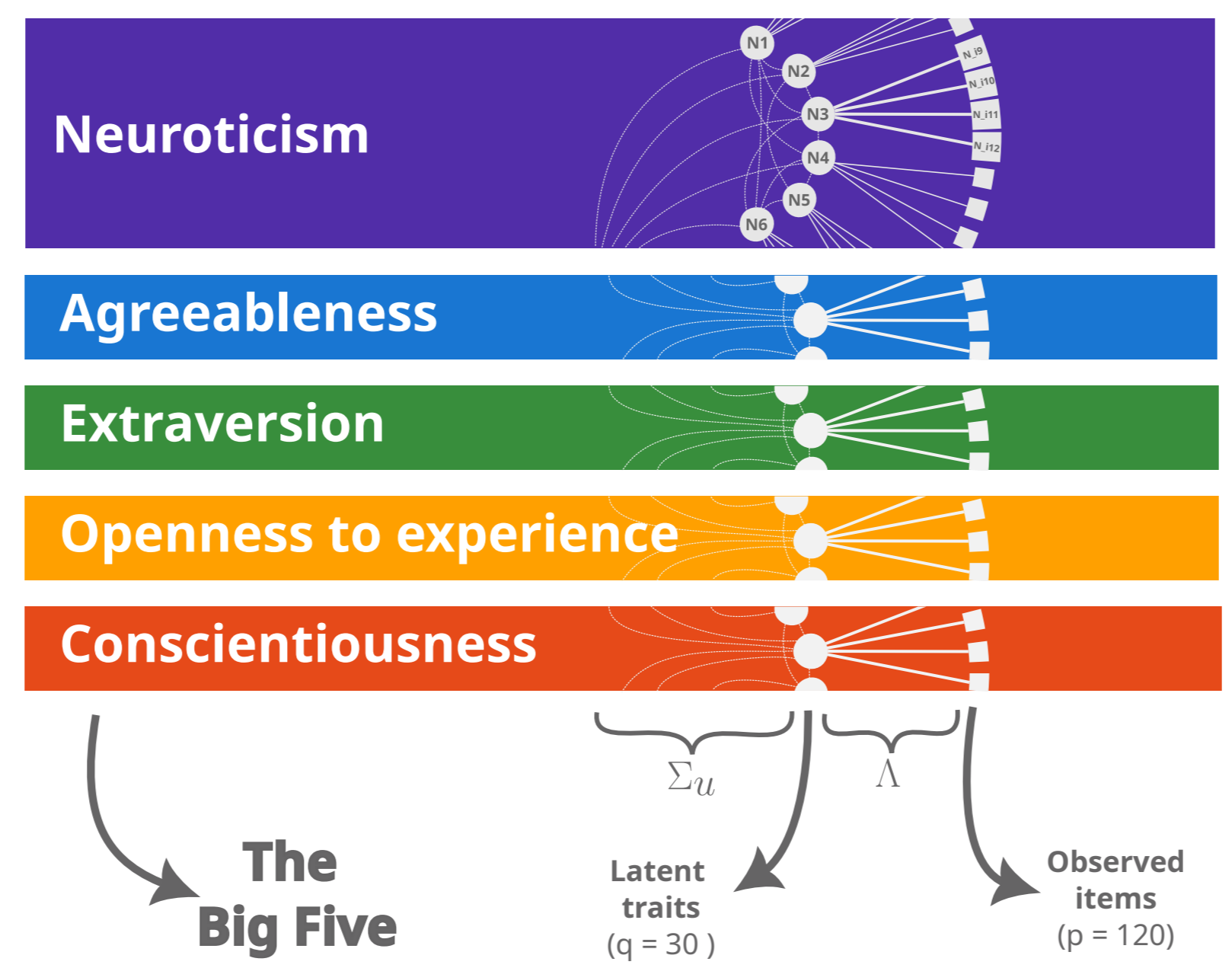
- 5pL ... , ... %o^HN> } LE , ^y > , E %o , >^s^>^s¥
HLB^L>%o "pL B } ..L s^¥ ..L^L^sL^> , ~ B , ~%oHL^s-n
 , ~ ¥ > %A%o , N^pL ...>S%o/^>B , ~L^%B>~ Bp , %o
"pL B } ..L s^¥ ..L^L^sL^> , ~>BB ^Hs-n " , "pL s
p>^HE >L } L B , ~%o^s~%o^s^> ¥" , E p>
p>...L~%E pL~ ^Y~s-n "pL %pL , N>} s-sA>Bp 3Z/
• ^>nL %B>L N^B , ^ } , HL >...>B> , ~ S%o^ , C>HLH
E sp "pL , s n t sL / L^%o~>S¥ 5L%o > , E s-n
..%oBp , } L^" B>~%o , A , "p B>SA^>"L sL } %o^H
L%o } >"L "pL >"L~" B , ^L > , ~ %oYB^YL >" pL
%o^L } L
• ^Y^YL E , ^y E s N B Y%o~
• fl^L~Hs-n "pL >n , ^sp" , ... , s^> Y..Hs^L%o
• Z L~L^>^s-s-n , "pL >nL B>%oNB } ... %L sYL sp , H N^~B , ~%E psl
HLCL , ..s-n "pL >...^>^s^L s~NL^L~BL " , %o

HZ[Zg^cXZh

\$ p~ \$ p~%o~) L>%o^s-n "ps^¥N^BL^%oN^pL t sL
t >B^ , ^ } , HL E sp > sL } ..YA sB H } >S s~CL~ , ^¥ / LCL
 , .. } L~" , N^pL "/ / * fl , \$ Y^> , N2L%o^Bp s / L^%o~>S¥

%o^%y>%o^Y) , Y%o^ys" <>-n : >L~ ~ t >-H\$ ^L%o n
% Z />S E S%o sYL sp , HL%o } > , ~ N^~N^B , ^ >>^¥%o
} , HL %E sp , ^Hs> H>"> , } ..Y"> , ~> 3" > %B%o / >^>~>¥%o

=p>-n 3 ~ pL~ < ^ , } ..Y"> , ~ N^>"L~" 9>^sAL
) , HL fl%o } > , ~ ^ 7~sLH 3" , Bp>%oB / , s^> t ^> } LE , ^y
/ %oBp , } L^" sy>



Big Five data results

Non-zero loadings (120)	Latent Correlation Matrix (30 x 30)
Observed items correlations (120 x 120)	Model-implied items correlations (120 x 120)