



$$:2M/2^{\cdot} \quad M/i?2 \, iBK2 + Qb\grave{r} \, Q7 \, T22^{\cdot} \, ^{\cdot}2pE$$

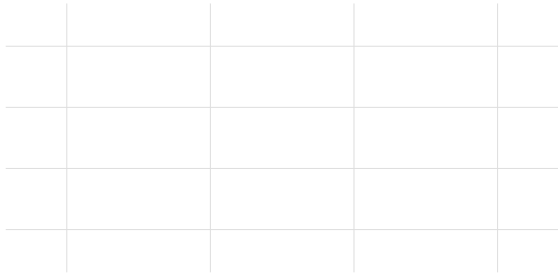
$$.B \, M2 \, H2t^p \, M/2^{\cdot}$$

TQQ`Hv BM7Q`K2/ `272`22bc r?2M `2pB2r2/ #v r2HH@BM7Q`K2/ `272`22b-
TQbbB#Hv `2p2`b2X h?Bb T ii2`M bm;;2bib i? i MQpB+2 `272`22b BMBiB H
72K H2 mi?Q`b- #mi b i?2v ; BM 2tT2`B2M+2- i?2B` #BHBiv iQ B/2MiB7v
T T2`b +QMp2`;2b- bQ ; Tb BM `2pB2rBM; iBK2- ++2Ti M+2 `i2b M/`QMm/
`2K BMb M BKT2`72+iT`Qtv 7Q`2zQ`i- Bib bBKBH ` /2+HBM2 M2p2`i?2H2bb
r`Bi2`2TQ`ibi? i 72K H2 mi?Q`b `22bT2+B HHv[mB+FiQ`2bTQM/iQX JQ`
MQi #B b2/Mb2M U+QM/BiBQM H QM b2H2+iBQM +`Bi2`B V- i?2Mi?2 2ti` iB
iQ MQpB+2 `272`22b `2H iBp2 iQ 2tT2`i `272`22b +QKT `2/ iQ K2M r?B+? r2
/ vb +QMb2`p iBp2Hv TT`QtBK i2b i?2 +Qbi iQ rQK2M Q7 bi iBbiB+ H /Bb+`E
h?2b2 `2bmHib ?QH/ 7i2` ++QmMiBM; 7Q` `272`22 }t2/ 2z2+ib- bm;;2biBM;
i?2b K2272`22 `2pB2rb KQ`2 T T2`bX h?2v `2 HbQ`Q#mbi iQ CQM`QH HBM
+Q/2b- BMbiBimiBQM H` MF- mi?Q`T`QKBM2M+2- MmK#2` Q7 +Q@ mi?Q`b
?Qr2p2`- i? i #2ii2` BM7Q`K iBQM + mb2b i?2; Tb iQ /2+HBM2 QMHv B7 TQQ
Q7 K Mmb+`BTib `2 +QKT `2/ iQ r2HH@BM7Q`K2/ #mi Qi?2`rBb2 B/2MiB+ H
K Mmb+`BTib- M bbmK TiBQM r2 2tTHQ`2 KQ`2 + `27mHHv BM TT2M/Bt
A/2MiB7vBM; i?2 TBpQi H`QH2 TH v2/ #v `272`22 2tT2`B2M+2 HbQ ?2HTb m
;2M/2`2/ +Qbi Q7 T22` `2pB2rX b `272`22b ; BM FMQRH2/;2 #M2i v?2 T`Q+
1+QM QK;2M/2` ; Tb BM `2pB2r H2M; i? /2+HBM2- bm;;2biBM; i? i 2/BiQ`b K v
BM Qmi+QK2b r?BH2 ?QH/BM; i?2 BM7Q`K iBp2M2bb Q7 i?2 `272`22BM; T`Q
TQQH Q7 +QKT2i2Mi M/ 2tT2`B2M+2/ `272`22b M/ bbB;MBM; i?2K KQ`2 72I
h?Bb T T2` +QMi`B#mi2b iQ MmK2`Qmb bi` M/b Q7 i?2 HBi2` im`2X 6B`bi- r2
i? i/Bb+`BKBM iQ`v b2H2+iBQM T`Q+2/m`2b K v #2 H `;2Hv /`Bp2M #v 2p Hm
Q` H +F Q7 2tT2`B2M+2X AM T`iB+m H y k k m Q 2 F BM /iB2`b2biBM; iQ b?Qr i?
vQmM;2`- H2bb 2tT2`B2M+2/ HQ M Q{+2`b `2 KQ`2 HBF2Hv iQ `2[mB`2 ;m
+QKT `2/ iQ Qi?2`rBb2 B/2MiB+ H K H2 TTHB+ MibX qBi2BMH y R M KB+ 7` H
b?Qr i? i 2p Hm iQ`b `2 H2bb HBF2Hv iQ /Bb+`BKBM i2 ; BMbirQK2M bi?2
GBF2 "Q2i2 N x y R N r2 Q#b2`p2 ?Qr Qmi+QK2b +? M;2 b i?2 b K2 2p Hm iQ`B
BM7Q`K iBQM- #mi bBKBH `iQ i?2 7Q`K2`- r2 7Q+mb QM 2p Hm iQ`b ö FMQRH2
Q7 bb2bbK2Mi- ?QH/BM; i?2 BM7Q`K iBQM i?2v ? p2 #Qmi i?2 BM/BpB/m H
HHQrb mbiQ B/2MiB7v T bbBp2 M/ HBF2Hv KQ`2 72 bB#H2 K2 Mb Q7 mbB
i?2 M2; iBp2 +QMb2[m2M+2b Q7 #B b, `i?2`i? M ;BpBM; `2pB2r2`b KQ`2 BM7
`2 2p Hm iBM;- bbB;M KQ`2 2tT2`B2M+2/ `2pB2r2`b iQ 2p Hm i2 rQK2MX
a2+QM/- r2 T`QpB/2 7m`i?2` 2pB/2M+2 i? i rQK2M `2+2Bp2 HQR2` [m HBiv- ?
`2H2p Mi /pB+2 +QKT `2/ iQ K2MX 6Q` 2t KTH 2 y k k H M2 M? M7 2 K b B2` K i m / 2 M i b
`2+2Bp2 bm#bi MiB HHv KQ`2 BM7Q`K iBQM QM rQ`FfHB72 # H M+2 r?2M b2
M/ i?Bb K v /2i2` i?2K 7`QK i?2B` T`272`22/ + `22` T i?X21p B u k y R M 2 BM "m+
bm;;2bib i? i }M M+B H /pBbQ`b Qz2` KQ`2 b2H7@b2`pBM; M/ }M M+B HH
HQR2`BM; i?2B` BMP2biK2Mi`2im`Mb`2H iBp2 iQ K2MöbX AM Qm` bim/v- r2
KQ`2 iBK2`2pBbBM; r?2M i?2v `2 öi`2 i2/ö rBi? H2bb 2tT2`B2M+2/ `272`22
2pB/2M+2 i? i BM2tT2`B2M+2/ `272`22b pB2r rQK2Möb T T2`b b ö`BbFB2`ö
#2+ mb2i?2v `2 H2bb 7 KBHB `rBi? 72K H2@ mi?Q`2/ rQ`F M/ ö?2/;2ö i?2B
iQm;?2` `2TQ`ibX
h?B`/- Qm` bim/v +QKTH2K2Mib `2b2 `+? 2tTHQ`BM; ?Qr mM+2`i BMiv +`2 i2
+QK2 ; TbX 6Q` 2t KT 2 2 - H y k y R M / i? i rQK2M T2`7Q`K #2ii2` BM M2; QiB iB
H2bb bBim iBQM H K#B; mBivX aBKBH `Hv- ;`2 i2` +H `Biv QM `2[mB`2/ [m H
`QMm/BM; 2tT2+i2/ QM@i?2@DQ# 2z2+iBp2M2bb BM+`2 b2 rQK2Möb M/ K2

72K H2@ivT2/ DQ# QTTQ`imMBiB22i-`HxKj2.2iH}M2QWUq2z/KiQ i?Bb`2b2`+?
#v bim/vBM; K#B;mBiv QM i?2 Qi?2`bB/2 Q7 i?2 bb2bbK2Mi T`Q+2bb M/}M
`2 HbQ KQ`2 +QKKQM r?2M 2p Hm iQ`b`2 H2bb 7 KBHB`rBi? i?2 Q#D2+iE
6BM HHv- Qm` 2pB/2M+2 bm;;2bib i? i T22` `2pB2r K v BKTQb2 ;`2 i2` +Qbi
2+QM QKBbibV r?2`2p2` i?2v bm#KBi- i?mb T`QpB/BM; 7m`i?2` 2pB/2M+2 i?
iQm;?2` bi M/`/b i? M2K2M`U2i22Hxky>2M k2/Hk>2M;2H M/kjQXMJQbi
`2H2p Mi iQ Qm` rQ`fy-kv2M2H U? i 72K H2@ mi?Q`2/ T T2`b Tm#HBb?2/ BM
BMi2`2bi 2+QM QKB+b DQm`M Hb bT2M/ i?`22 iQ bBt KQMi?b HQM;2` mM/2
2[mBp H2Mi K H2@ mi?Q`2/ T T2`bX AM //BiBQM iQ }M/BM; bBKBH`iQT@H
DQm`M Hb- r2 #mBH/ QM i?Bb rQ`F #v mbBM; KQ`2 /2i BH2/ / i iQ BMp2biB;
/`BpBM; i?2b2 ; TbX
h?Bb T T2` T`Q+22/b BM i?2 7QH H/QrB+MB Q2b2i`x2 d2i+XBQ2B KBQ2M ;2M/2` ; Tb
BM iBK2 M/ H2M;i? Q7 T22` `2pB2rX a2+iBQM

q2 +QMbi`m+i2/ Qm` / i b2i BM i?`22 bi2TbX 6B`bi- r2 2ti` +i2/ i?2 7QHHQrB
B/ MmK#2`b- iBiH2b M/ +Q``2bTQM/BM; mi?Q`b 7Q` 7mHH@HM; ;i? - `2;mH
1+QM QKBM b b2T ` i2Hv- UBBV i?2 M K2b M/ mMB[m2 B/ MmK#2`b 7Q` 2p2`
`2pB2r2/ T T2` i? i r b 2p2Mim HHv ++2Ti2/ 7Q` Tm#HB+ iBQMX

AM i?2 b2+QM/ bi2T- r2 +QHH2+i2/ Tm#HB+Hv p B X# 2#BQ17 Q+ B 2i M Q2M+QM @
iBQM +QmMibV M/ B/2MiB}2/ `272`22b M/ mi?Q`b rBi? KmHiBTH2 11J ++Qm



6B;m`2 R, amKK `v bi iBbiB+b 7Q` K MlM2+;B Li-bQTMQ#HB+b? 2/ BM

LQiX :` T? U V Bbi?2 irQ@v2 ` KQpBM; p2` ;2 Q7 i?2 T2`+2Mi ;2 Q7 T T2`b Tm#HBb?2/ M/ bmb
72K H2@ mi?Q`2/- r?2`2 672K H2@ mi?Q`2/6 `272`b iQ T T2`b rBi? 72K H2 +Q``2bTQM/BM;
irQ@v2 ` KQpBM; p2` ;2 Q7 i?2 iQi H MmK#2` Q7 K Mmb+`BTib Tm#HBb?2/ M/ bm#KBii2/ 2 +
THQi i?2 /Bbi`B#miBQM M/ irQ@v2 ` KQpBM; p2` ;2 Q7 iQi H MmK#2` Q7 `QmM/b- `2bT2+iBp2
/Bbi`B#miBQM M/ irQ@v2 ` KQpBM; p2` ;2 Q7 i?2 iQi H MmK#2` Q7 / vb ` K Mmb+`BTi bT2M/
:` T?b U:V M/ U>V b?Qri?2 /Bbi`B#miBQM M/ i?2 irQ@v2 ` KQpBM; p2` ;2 Q7 i?2 iQi H MmK#2`
rBi? mi?Q`b- `2bT2+iBp2HvX

T T2`b BM kyRy i? M i?2v /B/ BM kyy8- #mi #2ir22M kyRy M/ kyRN i?2 p2` ;2
`2H iBp2Hv ~ iX

6BM HHv- 72K H2 mi?Q`b bT2M/ KQ`2 iBK2`2pBbBM;H?QM/iQ2/Bi2i`B#?nQBQM
Q7 i?2 iQi H MmK#2` Q7 / vb mi?Q`b i F2 iQ`2pBb2 i?2B` K Mmb+`BTib #v ;2
RRR / vb`2pBbBM; i?2B` T T2`bc rQK2M bT2M/ R9y / vbX u2i i?2 +QK#BM iE
M/ 72K H2`2T`2b2Mi iBQM /Q2b MQi TT2` iQ /`Bp2 i?Bb T ii2`MX _2pBbB
BM i?2 H bi Ry R8 v2`bX AM kyy8- mi?Q`b iQQF- QM p2` ;2- RRk / vb iQ`2p
iQQF RRR / vb ~~u v x~~;m`2

AM TT2M~~X B~~r2 bmKK`Bb2 //BiBQM H / i QM 2/BiQ`B H /2+BbBQMb- T`QTQ`
p2` ;2 MmK#2` Q7 / vb bT2MirBi?`272`22b M/ mi?Q`b BM 2 +?`QmM/ Q7`;
Q7 K Mmb+`BTib`2 BKK2/B i2Hv ++2Ti2/ BM i?2 }`bi`QmM/c i?`22@[m`i2`
K F2 K DQ` M/ KBMQ``2pBbBQMb-`2bT2+iBp2HvX hBK2 bT2M/`2pB2rBM;
rBi?`QmM/- #mi 72K H2@ mi?Q`b?BT TQbBiBp2Hv +Q``2H i2b rBi? BiX h?Bb
i?2 2pB/2M+2 BM 6B;m`2

j :2M/2` ; Tb BM iBK2 M/ H2M;i? Q7 T22` `2pB2r

jXR *QM+2Tim H 7` K2rQ`F

AM i?Bb b2+iBQM- r2 /2}M2 7Qm` K2 bm`2b i? i + Tim`2 ;2M/2` /Bz2`2M+2b B
2p2Mim HHv ++2Ti2/ T T2`b, UBV i?2 ;2M/2` ; T BM i?2 KQmMi Q7 iBK2 `27
UBBV i?2 ;2M/2` ; T BM i?2 `QmM/@#v@`QmM/T`Q# #BHBiv Q7 ++2Ti M+2c
Q7 `2pB2rc M/ UBpV i?2 ;2M/2` ; T BM i?2 2zQ`i mi?Q`b 2tT2M/ `2pBbBM; i?
1[mViB 2pB2rK2m tmaxt ++2Ri ttt BM `Qf •òl-&ô) ñ -&÷00 DE° ÐÀ€%BB Ðð P,pV i?%B m;ft
/Q MQi`2D2+i Ubi ;2 Rv,k BM 6B;m`2

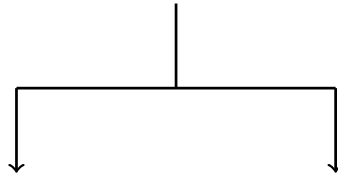
$$R = E \overset{h}{iBK_2} \overset{R}{iBK_2} jD_{j_1 \max t} = ++2;R_{j_1 t} 6 _2D;Q_{j_1 t} = Q_{j_1 t} ; \quad URV$$

r?2`2 iB K B b i?2 H2M;i? Q7 iBbK22M/222p2Hm iBM j,kB M m QmDA T i B b i?2
2/BiQ`öb /2+BbBQM i i?2 2M/naxtM2 j B b H`2QmB2Qm+2/ B K K 2M/QiBQM
r?2`22pB22Mib p2öiQQQm/ HBiB2b`2Ri2p2Xi;KQp2Hiv-`B;Qm` M/`2 / #BHBiv
l2m;f /2MQi2b K H2@ M/ 72K H2@ mi?Q`2/ T T2`b-`2bT2+iBp2HvX
1[m iB QWKL2 bm`2b i?2 ;2M/2` ; T BM max R` QmM/@#Q-@8;Q-@MGE-T`QfA #B B Biv iB

Beginning of round t -----> End of round t

Stage 0. Author
 Author drafts ($t = 0$)
 or revises ($t > 0$)
 manuscript j .

Stage 1. Referees
 Referee i (re-)evaluates
 j with respect to qualities Q_{jt}
 and recommends R



$6B; m^2 k, a^2[m^2 M + 2 Q^7 2 p^2 M i b / m^2 B M; ^2 p B b B Q M ^2 Q m M /$
 $L Q i \otimes _{Q m M \# / 2; B M b r B i ? i ? 2 m i ? Q ^2 B i t \neq 20} / ^7 i B M; U$

Pm`b2+QM/T`Q#H2K Bbi? i r2/Q MQi FMQr i?2 +QKTQM2Mjt b BMj Hm/2/ BM i
MQ`/Q r2 FMQr?Qr2 +? Bbr2B;?i2/ BM`272`22bö M/2/BiQ`bö Qp2`HH/2+B
iQ UBKT2`72+iHvQjt`MQy BM`p`BQmb r vbX Pm`T`BK`v T`Qtv Bb +Bi iBQ
B7 +Bi iBQMb + Tim`2/}M H ++2Ti M+2 +`Bi2`B rBi? x2`Q MQM@+H bbB+
bm;;2bib i? i i?2v /Q MQi +Bi iBQMb `2 M2Bi?2` `QmM/@bT2+B}+ MQ`K2 b
K v #2 BM~m2M+2/ #v T22` `2pB2r BM r vb i? x`6Q`2HK2HBi b m2K Q122`272`
rQ`F? `/2`iQ BKT`Qp2 rQK2Möb K Mmb+`BTibc i?2M +QM`QH HBM; 7Q` +Bi
M/ max t X q2 i?2`27Q`2 HbQjt`MQy m QB M; `272`22bö M/2/BiQ`bö `QmM/bT2+
Bijt MDjt - 1[m iBQMQU MHvV- i?2 2/BiQ`öb /2+BbBQM Dp M i 2 m i 2pBM u b `Qm
QM HvV- M/i?2 2/BiQ`öb /2+BbBQM B M i 2pBM u b `Qm
z2+i2/ #v i?2 b K2/Bb+`BKBM iBQM + Tim`2/ #v QMi`QH HBM; 7Q` i?2K K v +
mbiQ m M/2`@2biBK i2i`m2;2M/2`; TbX L2p2`i?2H2bb- b HQM; b i H2 bi Q
Q7 rQK2M-i 2pBM H/ biBHH +QMb2`pR iBp2HvM/bTmax BKxi2

$$iBK_{jt} = \alpha_0 + \alpha_1 72K_{jt}H_{22}Q_{jt} + \alpha_3 t + \alpha_4 I_{jt} + \alpha_j + \alpha_{jt};$$

r?2`2i\$B2iBK2bT2Mi`2pBbB\$BMK`QmMh`BTi?2KtBKmKMmK#2`Q7KMmb+
T`2pBQmbHvTm1#M2Bbv?2#QmMQKBMvbmi?QXQM BM1[mBBQMbmU/dU-r2
+QMi`QH7Q`v2`Q7bm#KBbbbBQMqjM-/r2QmM2/2iBiQ`Q6v/2QBbBQMbi i?22M
T`2pBQmbDiQmM/Ui?22M/Q7i?2+mDit2MimQMmBM/iBQMbx

IM7Q`imM i2HbBiBKQ`T`QtvA7XQ`b2z`Q`imBM 1[m iBQHBU2Hv+QM i BMb bm#b
iB HMQM@+H bbB+ HK2 bm`2K2Mi2``Q`X 6Q`2t KTH2- ;`2 i2`+?BH/+ `2 Q
`2bTQM bB#BHBiB2b K v 7Q`+2 rQK2M iQ Tmb? i?2B` 2p2Mim H`2bm#KBbbBQ
72r2` ;` Mib + M H2 p2 i?2K rBi? 72r2` `2bQm`+2b iQ +QKTH2i2 `2pBBBQM
72K H2 + /2KB+ 2+QM QKBbib `2 KQ`2 T`2\*;XB iQ m bBi v R XKRd Qv2/`0 b a2Hi-
i?2v K v bT2M/ KQ`2 iBK2 b2 `+?BM; 7Q Rj M2/ TmTh2v B2M? iQ IMQ#b2HB #H2 K2 M
++QmMiBM; 7Q`i?2b2 7 +iQ`b- r2 2M+Qm` ;2 //BiBQM H 3vXiBQM r?2M BM

$$jXjXR1M2`;v1+QM QB+b$$

```
h #H2/BbTH vb `2bmHib 7`QK PGa 2biBk8ViBQ`Q HQ7KMbm 6BRQMqKHyKM UjVV-
uV U+QHmKM U9V U8VVX AM i?2 iQT T M2H- r2 T`Qtv 7Q`;
Q7 i?2 +Q``2bTQM/BM; mi?Q`c BM i?2 #QiiQK T M2H- r2 +QKT `2 bQHQ@7
K H2@ mi?Q`2/ T T2`bX _2bmHib BM #Qi? T M2Hb bm;;2bi i? i`272`22bi F2
72K H2@ mi?Q`2/ T T2`b- 72K H2@ mi?Q`2/ T T2`b ;Q i?`Qm;? KQ`2`QmM/
bT2M/ HQM;2``2pBbBM; i?2KX
```

6B`bi-`272`22b bT2M/- QM p2`;2-9 Ry / vb HQM;2``2pB2rBM;72K H2@ m
UkV Q7 R/BH2H v`2bmHib7`QK PGa2biB3V XBAQM+Q7H1f kM B/Qj Un2bTB Q;tv7Q`
+Bi iBQMbc Qm``2bmHib bm;;2bii? i`272`22bi F29X8 / vb HQM;2`iQ`2pB2

Rk ++Q`/BM; iQ T bi `2b2 `+? - K2M `2 /BbT`QTQ`iBQM i2Hv KQ`22HBHf3yRv iQ`/Bi22i?2B` QrM
K H2@ mi?Q`2/rQ2F UxkRQmRQ`F2M Hxky 62`#2N3eEQkyRWX 1+QMOKBbib #2HB2p2 72K H2@ mi
T T2`b `2 +Bi2/H2bb-?QH/BM; [m 2BixkyQxkbf WiUxkyky HbQ}M/i? i2/BiQ`b M/`272`22b;Bp
72K H2@ mi?Q`2/T T2`b HQR2` 2p Hm iBQMb- +QM/BiBQM H QM +Bi iBQMbX
Ri Hi?Qm;? 2 +? Q7i2b2 2t KTH2b +QmH/ Bib2H7 #2 Bmi2`T`2i2/ b` 7Q`K Q7/Bb+`BKBM iE
`2pB2r1M2`v 1+QMOKBb`Q`2 MQi+ TinR`2/ #2Tj`QmM/b`AX

h #H2 R, :2M/2` ; Tb BM iBK2 M/ H2M, iM 2` 7VT22Q M2QKB + bi

	1[M X W	1[M X W	1[M X W	1[M X W		
	. vb bT2MirBi?`27E[222]Ti	LQX`QmM/bv	bT2MirBi?	mi?Q`b		
	URV	UkV	UjV	U9V	U8V	UeV
62K H2 +Q`2bTQM/BM; mi?Q`b						
72K H2	4:482	4:754	0:028	0:103	11:133	10:890
	(1:647)	(1:677)	(0:014)	(0:046)	(5:216)	(5:377)
t U`QmM/V	15:893	12:608	0:363		41:755	28:627
	(0:972)	(1:625)	(0:016)		(2:340)	(2:182)
+Bi iBQMb U bB4099V	5:243		0:002	0:011	11:604	
	(0:836)		(0:004)	(0:015)	(1:796)	
Rijt U`272`22öb`2+QKK2M/ iBQM V						
`2pBb2 UKBMQ`V	5:413					
	(1:798)					
`2pBb2 UK DQ`V	7:187					
	(2:280)					
Dit U2/BiQ`öb /2+BbBQM V						
`2pBb2 UK DQ`V	2:963					2:382
	(3:215)					(7:482)
`2pBb2 UKBMQ`V	2:643					5:581
	(1:986)					(4:495)
Ij UT`QKBM2M+2V					1:263	1:477
					(0:367)	(0:278)
Djt 1 UK DQ`V						43:731
						(4:204)
LQX Q#bX	d-y99	d-y99	d-9dj	k-j8N	j-3RN	j-3RN
R ²	yXy3j	yXydR	yXkd8	yXyj3	yXRR9	yXRje
"QmM/bW	(9Xk9- 9X93)	(9Xd8- 9Xd3)		(@yXy9- @yXyj)	(yXRy- yXRy)	(NX
J2 M /2TX p`X8jXk3y	8jXk3y	yXkdk	RXekk	dRXkyN	dRXkyN	
aQHQA@ mi?Q`2/ T T2`b						
72K H2	9:571	8:852	0:013	0:071	30:741	30:856
	(3:975)	(4:104)	(0:035)	(0:122)	(17:150)	(17:670)
t U`QmM/V	12:250	8:661	0:329		34:898	27:559
	(1:308)	(1:853)	(0:029)		(5:465)	(5:634)
+Bi iBQMb U bB4099V	4:099		0:002	0:021	5:132	
	(1:277)		(0:009)	(0:040)	(2:697)	
Rijt U`272`22öb`2+QKK2M/ iBQM V						
`2pBb2 UKBMQ`V	9:758					
	(4:218)					
`2pBb2 UK DQ`V	12:792					
	(4:525)					
Dit U2/BiQ`öb /2+BbBQM V						
`2pBb2 UK DQ`V	0:801					7:009
	(6:185)					(11:758)
`2pBb2 UKBMQ`V	3:893					13:383
	(5:145)					(9:917)
Ij UT`QKBM2M+2V					3:901	3:528
					(1:589)	(1:451)
Djt 1 UK DQ`V						27:690
						(9:829)
LQX Q#bX	R-kd8	R-kd8	R-j8y	99d	d99	d99
R ²	yXyeN	yXyed	yXk8N	yXy9d	yXRyk	yXRRd
"QmM/bW	(NX8d- RyXky)	(3Xde- 3X38)		(@yXyj- @yXyR)	(yXyd- yXyd)	(ke
J2 M /2TX p`X8jXjN8	8jXjN8	yXk98	RXeeN	edXkkd	edXkkd	
u2`	3	3	3	3	3	3

LQi2KB; m`2b +Q`2bTQM/ iQ +Q2{+B2Mib 7`QK8/bBkM BM/3W Xma MB QM ti Q T T M2H- r2 T`Qtv 7Q`
; 2M/2` mbBM; i?2 ; 2M/2` Q7 i?2 +Q`2bTQM/BM; mi?Q`c BM i?2 #QiiQK T M2H- r2 +QKT`2 bQ
bQHQA@K H2@ mi?Q`2/ T T2`bX ai M/` / 2`Q`b +Hmbi2`2/ #v`272`22 U+QHmKMb URV UkVV-
bTQM/BM; mi?Q`U+QHmKMb U8V UeVV BM T`2Mi?2b2bX - M/ bi iBbiB+ HHv bB; MB}+ M

mi?Q`b`2H iBp2 iQ T T2`b #v K H2 +Q``2bTQM/BM; mi?Q`b- M/ NXe / vb H
72K H2 mi?Q`b +QKT `2/ iQ T T2`b #v K H2 bQHQ mi?Q`bX "Qi? ;2M/2` ; Tb
r2 T`QtvQjQmbBM; MDjt U+QHmKM UkVVX
a2+QM/- `272`22b `2 H2bb HBF2Hv iQ `2+QKK2M/ ++2TiBM; 72K H2@ mi?
Rb?Qrb`2bmHib 7`QK 2biBKeVbm;B1M,m iBQMI2U` T`Q# #BHBiv KQ/2HX 1p2`v`
`272`22b `2 #Qmij T2`+2Mi H2bb HBF2Hv iQ `2+QKK2M/ ++2TiBM; T T2`b #
+QKT `2/ iQ bBKBH `[m HBiv T T2`b #v K H2 +Q``2bTQM/BM; mi?Q`bX q?
bQHQ@ mi?Q`4//TQT2`bQ R T2`+2Mi M/ Bib bi M/ `/ 2``Q` `Bb2bX Hi?Qm;?
Km+? bK HH2`- i?2 ; T Bb`Qm;?Hv bBQjHbB1M2M?r22T/BQ Q`7Q/2+BbBQM BM i?
`QmM/ U7Q` 72K H2 +Q``2b1T=Q M0B6M;binM? Q/ 12-`Q` yXyk8VX
h?B`/- 72K H2@ m2i?`Q`2`a1j TE2`b

h #H2/BbTH vb `2bmHib 7`QK 2biBK iBM; bBKBH `; 2M/2`; Tb BM iBK2 M/H
//BiBQM H jk 2+QM QKB+b M/}M M-12M2Qm`1M QHbQU2M+HbF/2Bi2 +QKT`2?2Mb
BM7Q`K iBQM r2M2p2v7Q+QM Q2B+b `2 7 `KQ`2 HBKBi2/, i?2v QMHv BM+Hm
U}`bi bm#KBbbBQM- }`bi /2+BbBQM M/}M H ++2Ti M+2V M//Q MQi+QM i
BMi2`BK 2/BiQ`B H /2+BbBQM bX L2p2`i?2H2bb- i?2v bm;; 2bi; 2M/2`; Tb BM
`Qm;?Hv BM HBM2 rBi? i?Ob2R`2b2Mi2/ BM h #H2

AM i?2 i?B`/ +QHmK-Mr2 7 7Q#H2bmHib 7`QK`2;`2bbbBM; T T2`b0 iQi H`QmM/K
;2M/2` +QKTQbBiBQM M/ +Bi iBQMbX *QMIR 7 22MH250?m27Qn12/bKBMMrb #H2T
i?`Qm;? KQ`2`QmM/b Q7`2pB2rX h?2 ; T 7Q`72K H2 +Q``2bTQM/BM; mi
2biBK i2/ BMRhB#H2b bBKBH`U M/ KQ`2 T`2+Bb2Hv 2biBK i2/V 7Q`bOHO@72

h?2 ;2M/2` ; Tb BM h2#H2#mbi iQ +QM i`QH HBM; 7Q` mi?Q` T`Q KBM2M+2- M
M/ K Mmb+`BTi H2M;i?VUX T?BM/ Bt#H2#mM/b +Q``2bTQM/BM;iQ i?2 bbmKTiB
mMQ#b2`p #H2b 2tTH BM #Qmi b Km+? Q7 i?2 p`B iBQM BM i?2 /2T2M/2Mi
`2 :2M2` HHv iB:?iHv +OKT +i2/ `OmM/TOB Mi2biBK i2b O7 72K H2 mi?O`

R4 q2 /`QT 9R K Mmb+`BTib rBi? }`bi /2+BbBQM iBK2 2t+22/BM; kX8 v2 `bX U HKQbi HH r2`2 Tr
M /i?2B` /2H v2/ /2+BbBQM b HBF2Hv `2~2+i BMBiB HHv HQbi Q` 7Q` ;Qii2M bm#KBbbBQM bXV
R3 q2 Q#b2`p2 bBKBH ``2H iBOMB 1B2B M 1?2MX K7B+b

h #H2 k, :2M/2` ; Tb BM iBK2 M/ H2M;i? Q7 T22` `2pB2r i jk 2+QM QKB+b

	hBK2 iQ } `bi /2+BbBQM		LQX `QmM/b maxtV		hBK2 7`QK } `bi iQ }M H /2+BbBQM	
	maxt ≤ 1		maxt ≤ 1		maxt ≤ 1	
	HH T T2`b	UkV	HH T T2`b	UjV	HH T T2`b	U8V
	URV	UkV	UjV	U9V	U8V	
62K H2 +Q` `2bTQM/BM; mi?Q`b						
72K H2	0:431	3:566	0:043	14:562	5:888	
	(0:442)	(1:611)	(0:020)	(3:039)	(2:336)	
+Bi iBQM b U b-5M18V	-4:490	0:015	-11:236	-3:897		
	(0:996)	(1:422)	(0:008)	(2:680)	(1:531)	
maxt				93:558		
				(8:062)		
T`QKBM2M+2				-0:835	-0:876	
				(0:364)	(0:290)	
LQX Q#bX	k9-8RR	Ry-dy3	k9-8ey	kj-Nyd	Ry-y3j	
R ²	yXRee	yXkRy	yXkk3	yX9y3	yXk9d	
"QmM/b U72K H2V	(yX9j- jX8R)	(jX8d- eXjN)	(yXy9- yXy9)	(RRXky- R9X		
J2 M /2TX p `X	RjyX9NR	RjX8dN	kR9XN89	RRkXjRR		
aQHQA@ mi?Q`2/ T T2`b						
72K H2	0:290	8:436	0:078	22:091	12:409	
	(3:051)	(5:040)	(0:024)	(5:025)	(6:879)	
+Bi iBQM b U b-5M32V	-5:513	0:029	-11:767	-4:535		
	(1:341)	(1:868)	(0:007)	(2:947)	(2:008)	
maxt				95:992		
				(10:333)		
T`QKBM2M+2				-6:543	-4:046	
				(1:693)	(1:052)	
LQX Q#bX	e-8jk	k-3de	e-88j			

9 h?2`QH2 Q7 bi iBbiB+ H /Bb+`BKBM iBQM

b /Bb+mbb2/ T`2p p Q`2K HvM bBK2`Q#H2K iB+ T`Qtv 7Q`~~R2V Q`~~li 2Bm2`iPraH B iQm U
1 0 TH mbB#Hv BK T+H B 2+Qim bi2`p iBp2HvA2-biB K +2bmb2`p iBp2HvA2biBK i2b
hQ b22 r?vk 2H2iwig + Tim`2`27Qb2BM7Q`K iBQM UTQQ`Hv M/ r2HH@BM7Q`K
/2}M2iB K2 bi?2 KQM Mij07biBki2Q`b bT2M/`2bTQM/BM; iQ

#bQ`#b i?2 2ti` iBK2 rQK2M bT2M/ +QKTH2iBM; i?2B^{ky`}2pBbBQMb- ?QH/BI

72K H2 mi?Q`b72r2/MVb9k2pBbBM;+QKT`2/iQK2M Ubi M/`/2``Q`R8V-Q`88

.BQM- JX GX- CX GX amKM2`- M/ aX JX JBi+?2HH UkyR3VX ó:2M/2`2/ +Bi iBQ
M/ bQ+B H b+B2M+2 K2iSQ/HQH Q+vHj2MUbJv6 BTX jRk jkdX
.m+?- 2iX HUXyRkVX óh?2 TQbbB#H2`QH2 Q7`2bQm`+2`2[mB`2K2Mib M/ +
;2M/2`/Bz2`2M+2b BM Tm#HB+ iBQ Ma`R2dLWFR BK-T28RqXkX
.m+iQ`- GX- aX :Qv H- M/ X S`mKK2` UkykRVX ó:2MB2r QM/ 1+QQHMQ#Q+ iBQM
ai iBbiB7Q`i?+QKBM;VX
.mzv- JX X UkyRdVX óG bi M/ +Q`2bTQM/BM; 1+iQ Q Q,Tv MiB1+2QJHBMMB-QQH Q;
TTX 33de 333dX
.rQ`FBM- 2iX HUXkykyVX óh?2 2ti2Mi M/ /`Bp2`b Q7;2M/2`BK# H M+2 BM M2m`
L im`2 L2m`Qk+B3M+2TX NR3 NkeX
62`#2`- JX X URN3eVX ó*Bi iBQMb, `2i?2v M Q#D2+aiB;2BK Q kbM T2TQ7j3R?QH
j3NX
URN33VX ó*Bi iBQMb M2/M2irQMFBQk+B2M- TTX 3k 3NX
: HH2M- uX M/ JX q bb2`K M UkykkVX óAM7Q`K2/ +?QB+2b,;2M/2`; Tb BM +
:m`BMQ- \*X JX M/ oX JX >X "Q`/2M UkyRdVX ó6 +mHiv b2`pB+2 HQ /b M/;2
Q7i?2 + /2KB+ 72KBH+V6BM >B;?2`813/MeVi-BQTMX edk eN9X
>2M;2H- 1X UkykkVX óSm#HBb?BM; r?BH2 72K H2X `2 rQK2M ?2H/ iQ ?B;?2
`2pB2rX0 1+QM QKB+RQ QbèM3M- TTX kN8R kNNRX
>2M;2H- 1X M/ 1X JQQM UkykkVX ó:2M/2` M/ [m HBiv i iQT 2+QM QKB+b DQ
E2HHv- CX- hX a /2;?B2?- M/ EX /2HB UkyR9VX óS22` `2pB2r BM b+B2MiB}
M/ bm`pBp Hh;2BC/Q0X M H Q7i?2 AMi2`M iBQM H 62/2` iBQM Q7 *HBMB+ H
J2/B+BkM 2jv- TTX kkd k9jX
EBM;- JX2JXHUXyRdVX óJ2M b2i i?2B` QrM +Bi2b ?B;?,;2M/2` M/ b2H7@+Bi i
iBK2aQ+ BmBTX R kjX
EQ{- JX UkyRNVX óAMMQp iBp2 B/2 b M/ ;2M/2`BM2[m HBivôX JBK2QX
G M;- EX M/ X EX@GX aTBix2` UkykyVX ó\_ +2 /Bb+`BK B Q miBMQ MI,QM 2+Q@Q
MQKB+ S2`bJ2UikBp-2bTX e3 3NX
J ii?2rb- aX X- JX PFmMQ@6mDBr ` - M/ X SQbiH2r Bi2 URN3QvXm_H2}MBM
Q7 1+QM QKB+8802Q`vTTX k9d kdjX
J iibbQM- SX- *X CX amM/#2`;- M/ SX G ;2i UkyRRVX óAb+Q`2bTQM/2M+2`2
#B#HBQK2i`B+ bim/v Q7i?2`2H iBQM #2ir22M +Q`2bTaQMB/BMI Q k2i? Q+bM/
3dURV- TTX NN Ry8X
J v2`- aX CX M/ CX JX EX \_ i?K MM UkyR3VX ó>Qr/Q2b`2b2`+? T`Q/m+iBpB
;2M/2`/Bz2`2M+2b 7Q` KmHiBTH2 Tan#B2B+iQBQMBBjV2-MTBQFveqXRenjX
J2 Mb- JX GX M/ CX 6X oQbb URNNeVX óq?Q`2 bQMbr2HH\hrQ bim/B2b Q7 B
Q7/Bz2`2Mi;` /2- #BHBiv- M/ *QM QBH2Q2H2p2AR19dXkv-iBQXRjN Rd3X
Pbi2`- 1X UkyRNVX óIMQ#b2`p #H2 b2H2+iBQM M/ +Q2{+B2Mi bi °ðÄ ;0+ 0

aK HH- JX GX M/ .X S ;2` UkykyVX óaQ+BQHq;B+ H T2`0Q2h+NBp2Q Q M+Q@B
MQKB+ S2`bJ2UikBp-2bTX 9N edX
avKQM/b- JX2jXHUJyyeVX ó:2M/2` /Bz2`2M+2b BM Tm#HB+ iBQM QmiTmi, iQr
Q7`2b2`+? T2`7SGQ Q aMP+210XRV- 2RkdX
q2bi- C2iXHUJyRkVX óh?2`QH2 Q7 ;2M/2` BM SG P Q H L3UvdVh-i2Qèk R B X ôX
q`2M- C2i.XHUJyydVX óh?2 r`Bi2J"Qb`2iBQ3M0XRV- TTX N33 NNRX
j9UkV- TTX 9kTkNkrj

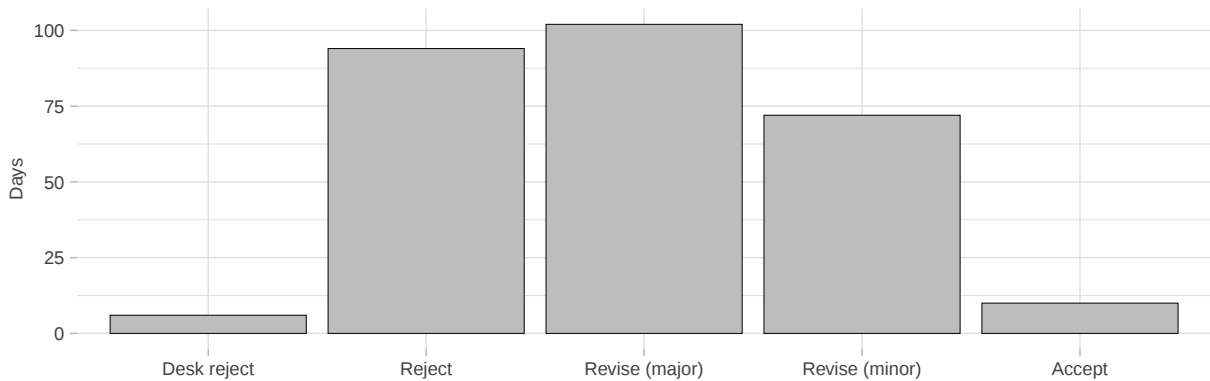
$$T T 2 M / B + 2 b$$
[illegible]

1M2` ;v 1+QMQRbB+TbTH2K2Mi H K i2`B H

XR LQM@KQMQiQMB+`2H iBQiMMP/BiB R 2ir22M

b r2 /Bb+mbb B M Xa2Q+MBQ M bQM r R j t 2b i` B B 2+i BM 1[ R / i B i Q #2b mb2`272`22b
TT2` iQ bT2M/ KQ`2 iBK2`2pB2Q M M ;DT2 #i2i`b M P 2?2v bT2M/`2pB2f Q M; T T2`b
`2D2+i- bm;;2biBM; MQM@KQMQiQMB+M/2HpiBQMBQMTiBKi2X2M

h?2 2pB/2M+2 7Q`i?Bb Bb T`X B 2 M i i T H Q M b 6 i B 2 m K 2/B M K Q m M i Q 7 i B K 2 T T 2`b
`272`22b #v 2/BiQ`/2+BbBQM i i?2 2M/ Q 7 2 +?`QmM/X Uq2`2TQ`i K2/B M
iQ HBKBi i?2 BKT +i Q 7 2ti`2K2 Q miHB2`b, bK HH MmK#2` Q 7 T T 2`b TT2
b2p2` H v2`b #27Q`2 #2BM; 22M X Q M M H v M 2 D 2 + i B T i r b m M / 2` `2pB2r 7Q` Q
v2`b #27Q`2 #2BM; /2bF`2D2+i2/XV 1/BiQ`b i F2 K2/B M Q 7 e / v b i Q`2D2-
7Q` `2pB2r U/2bF`2D2+iVc i?2 K2/B M`2D2+iBQM /2H v 7Q` T T 2`b i?2v /Q
KQM; MQM@`2D2+i2/ T T 2`b- i?2 K2/B Mb 7Q` `2pBb2 UK DQ`V-`2pBb2 UK B
dk M/ Ry / vb-`2bT2+iBp2HvX



6B;m`2 XR, J2/B M MmK#2` Q 7 / vb bT2MirBi?`272`22b M/ 2/BiQ`b- #
LQiX :` T? THQib i?2 K2/B M K Q m M i Q 7 i B K 2 b T 2 M i r B i ?`272`22b M/ 2/BiQ`b #v 2/BiQ`/2+BbB

h?2 b KTH2 mb2/ iQ 2biB X B 2 M 6 B m m 2b R j -j N e m M B [m 2 K M m b +`B T i @`Q m M / B
j-dd9 r2`2 /2bF`2D2+i2/ K Mmb+`BTib- j-9jd r2`2 K Mmb+`BTib`2D2+i2/ 7i2
k-y8kr2`2 6`2pBb2 UK DQ`V 6 /2+BbBQM b- R-ded r2`2`2pBb2 UKBMQ`V/2+Bb
LQi2 i? i i?2b2 k-jee ++2Ti2/ Q#b2`p iBQM b +Q` `2bTQM/ iQ i?2 b K2 mMB[m2

Xk _QmM/@#v@`QmM//2b+`BTiBp2 bi iBbiB+b

h #H2 XR, _QmM/@#v@`QmM//2b+`BTiBp2 bi iBbiB+b 1B12B`b17QM`QT2+bTm#H

S2`+2Mi ;2 Q7 T T2`b								
_QmM/	62K H2		.2+BbBQM		p;X MQX / vb rBi?			
	P#bX	*Q``X	aQHq	J DQ``2pX	JBMQ``2pX	++2Ti		_27bXY1/b>
y	k-j8N	R9X8	jXedkX9	keXd	yXN	R8kX8		
R	k-jjd	R9Xe	jXd RRXN	jeX8	8RXe	8dXN	NdX9	
k	R-Rje	ReXN	9Xj9X9	RNXe	deXy	kkX8	jkXe	
j	kd9	R8Xd	kXe 9Xy	ReX9	dNXe	RkXN	kkX8	
9Y	dN	R8Xk	dXN eXj	kyXj	djX9	dXN	ReXd	

LQi2K#H2/BbTH vb`QmM/@bT2+B}+/2b+`BTiBp2 bi iBbiB+b 1B12B`b17QM`QT2+bTm#HBb?2/ BM
h?2}`bi+QHmKM Bb Bb i?2`QmM/- i?2 b2+QM/+QHmKM Bb i?2 MmK#2` Q7 Q#b2`p iBQM

Xj _QmM/@#v@`QmM/ Qmi+QK2 T`Q# #BHBiB2b

AM h #~~12~~2`2TQ`i`2bmHib 7`QK`2;`2bbBM; M BM/B+ iQ` p`B #H2 2[m HiQ
`2D2+iBQM U+QHmKMb URV M/ UjVV Q``2+QKK2M/2/ K DQ``2pBbBQMb +QM

• @ . Ä Ø - ÿ ã €

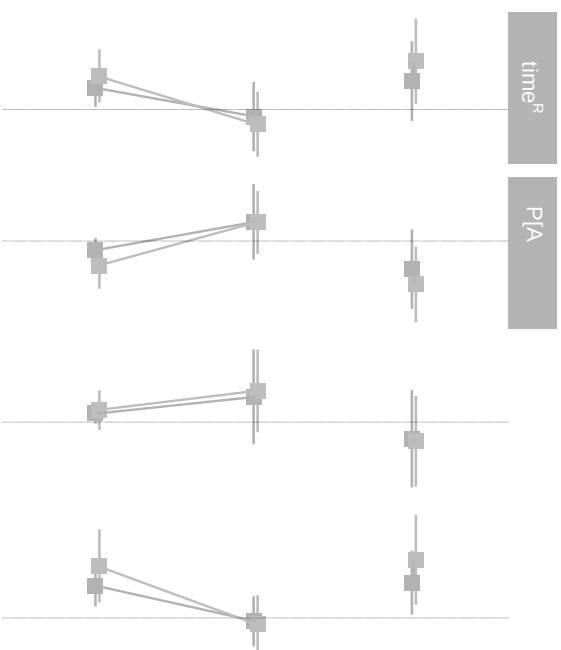
X8 Hi2`M iBp2 T`QtB2b 7Q` ;2M/2`

h?2 7QHHQrBM; i #H2b M/ };m R2M/ 8 B;HBM2i2M; #H22`M iBp2 /2}MBiBQM b Q7 7
i?Q`b? BT#H X 9 M/ 6B;m X 2+ QKT `2 2MiB`2Hv K H2@ mi?Q`2/ T T2`b iQ 2MiB`2H
T T2`bX h #8H2/ 6B;m X 2+ QKT `2 T T2`b rBi? b2MBQ`72K H2 mi?Q`iQ T T2`
K H2 mi?Q` UKBt2/@;2M/2`2/ T T2`b rBi? b2MBQ`hK#H2X em? QB;m2 2t+Hm/
X 8 2TH +2 i?2 #BM `v p `B #H2 Q7 72K H2 mi?Q`b?BT rBi? +QM iBMmQmb
mi?Q`bX AMXh M H 8 B;m X 2 /2}M2 72K H2 mi?Q`b?BT b ? pBM; i H2 bi 8y T
mi?Q`b UKBt2/@;2M/2`2/ T T2`b rBi? 72r2`i? M 8y T2`+2Mi 72K H2 mi?Q`b
X 3 M/ 6B;m X 2+ QKT `2 T T2`b rBi? i H2 bi QM2 72K H2 mi?Q`iQ 2t+HmbBp2H
AM ;2M2` H- `2bmH iX 9 B X 8 h2 #H2K B H `iQ i?Qb2 T`2bX Mi_2/b B M i l b #BM/2 +QHmKM
U8V UeV `2 KQbi bBKBH ` - Hi?Qm; ? i?2 X 9 M/ X 2 H M 2? BM h2#H 2 M 72K H2
mi?Q`b?BT Bb /2}M2/ H2 8 X;-X 2b B`B +h i X 2 H y 2b mHib BM +QHmKM b UjV M/ U9V
bB;M2/ +QKT `2/ iQ +Q``2bTQM/BM R 2 b i i B Q m 2 0 B?M v h #H 2 Q`2 MQBbBHv 2biB
h #H2X d M/ X 3 i?2v `2 HbQ Km+? bK HH2` BM K X 10 B i m; 22M/ 2`M; H T #H 2 M / vb
bT2MirBi? `272`22b U+QHmKM b URV UkVV `2 bBKBH `Hv bBx 12/ Q? 2H `;2` +Q
; Tb `2 Km+? bK HH2` U M/ MQi bB;MB}+ MiHv /B X 2 M 2 X i 7`QK x2`QV BM h #H
6B;m` X p X d HHbm;;2bi i? i iBK2 bT2MirBi? mi?Q`b /2+`2 b2b M/ T`Q# #BHBi
r?2M T T2`b `2 `2pB2r2/ #v 2tT2`ib BMbi2/ Q7 MQpB+2b- BM HBM2 rBi? +Q
6B;mj X 2 6B;m X 2 b M/ X 8 b m;;2bi i? i iBK2 bT2MirBi? `272`22b HbQ /2+HBM2b- H
BM 6B;m X 2 b X e M/ X d B b H2bb +H2 `X AM +QM j` bi rBi? 6B;m`2

X8XR 1t+HmbBp2Hv 72K H2@ mi?Q`2/

h #H2 X9, R #H2HmbBp2Hv 72K H2@ mi?Q`2/

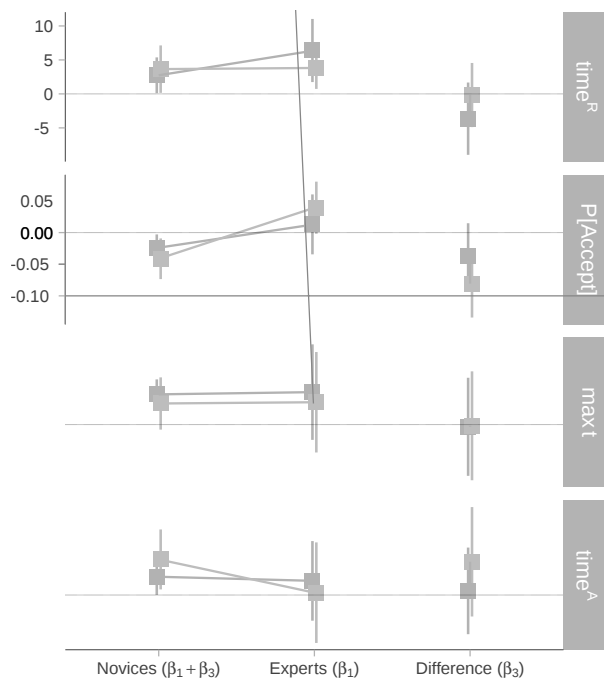
	1[M X W		1[M X eW	1[M X iW	1[M X W		
	. v b b T 2 M i r B i ? ` 2 7 2 ` 2 2 2] T i	L Q X ` Q m M / b v b b T 2 M i r B i ?	m i ? Q ` b				
	U R V	U k V	U j V	U 9 V	U 8 V	U e V	
R y y W 7 2 K H 2	6:063 (2:990)	6:443 (3:066)	−0:026 (0:024)	0:093 (0:084)	22:393 (11:278)	22:575 (11:897)	
t U ` Q m M / V	−15:851 (1:024)	−11:727 (1:600)	0:358 (0:018)		−40:615 (2:766)	−27:838 (2:598)	
+ B i i B Q M b U b − 5 1 2 2 V	−5:122 (0:910)		0:007 (0:005)	0:000 (0:018)	−12:177 (2:146)		
R i j t U ` 2 7 2 ` 2 2 ö b ` 2 + Q K K 2 M / i B Q M V							
` 2 p B b 2 U K B M Q ` V		5:583 (2:049)					
` 2 p B b 2 U K D Q ` V		8:532 (2:512)					
D i t U 2 / B i Q ` ö b / 2 + B b B Q M V							
` 2 p B b 2 U K D Q ` V		4:625 (3:353)				7:800	
D							



X8Xk a2MBQ`72K H2 mi?Q`

h #H2 X8, ~~R #H2~~ MBQ`72K H2 mi?Q`

	1[MX8W · vb bT2MirBi?`272`22öb`2+QKK2M/ iBQM V` URV UkV		1[MXeW · vb bT2MirBi?`272`22öb`2+QKK2M/ iBQM V` UjV	1[MXdW LQX`QmM/`b bT2MirBi?` U9V	1[MX3W · vb bT2MirBi?` U8V UeV		mi?Q`b
b2MBQ`72KX	3:932 (1:424)	4:386 (1:465)	-0:019 (0:011)	0:074 (0:040)	8:299 (4:784)	8:244 (4:829)	
t U`QmM/V	-15:884 (0:977)	-12:596 (1:636)	0:363 (0:016)		-41:731 (2:338)	-28:562 (2:179)	
+Bi iBQM b U b-5M21V	-5:121 (0:836)		0:002 (0:004)	0:011 (0:015)	-11:683 (1:799)		
Rijt U`272`22öb`2+QKK2M/ iBQM V` `2pBb2 UKBMQ`V		5:458 (1:791)					
`2pBb2 UK DQ`V		7:171 (2:272)					
Dit U2/BiQ`öb`/2+BbBQM V` `2pBb2 UK DQ`V		2:946 (3:217)					2:397 (7:497)
`2pBb2 UKBMQ`V		2:571 (1:991)					5:601 (4:509)
Ij UT`QKBM2M+2V					-1:181 (0:381)	-1:398 (0:291)	
Djt 1 UK DQ`V							43:873 (4:212)
LQX Q#bX	d-y99	d-y99	d-9dj	k-j8N	j-3RN	j-3RN	
R ²	yXy3j	yXydR	yXkd8	yXyjd	yXRR9	yXRje	
"QmM/`WU	(jXRd-jXNj)	(9Xy3-9XjN)		(@yXyk-@yXyk)		(yXyd-yXyd)	(eXRj



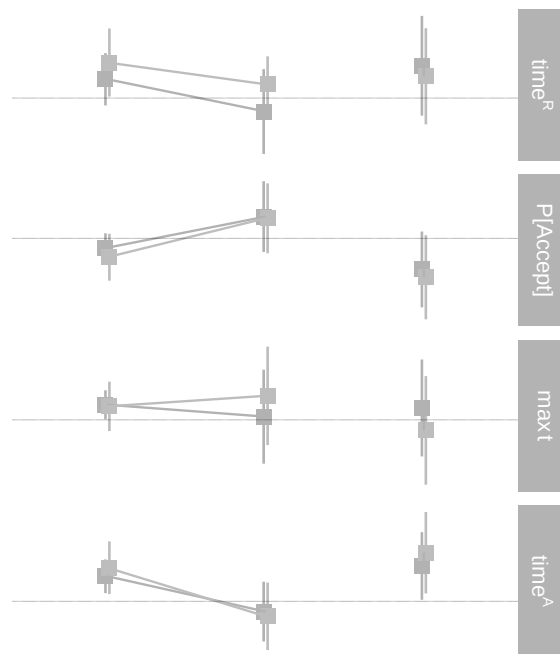
6 B ; m ` 2 X 9 , 6-B 2 2 M B Q ` 7 2 K H 2 @ m i ? Q `

L Q i 2 1 b i B K i 2 b ` 2 B / 2 M i B + H i Q i ? Q b 2 B M ? 6 B i ? 2 B M / 2 T 2 M / 2 M i p ` B # H 2 7 2 K H 2 ? b # 2 2 M ` 2 T H / m K K v p ` B # H 2 2 [m H i Q R B 7 T T 2 ` ? / i H 2 b i Q M 2 7 2 K H 2 m i ? Q ` r ? Q ? / T ` 2 p B Q m b H v T m # H B M M 2 ` ; v 1 + Q M Q K B 2 b + Q @ m i ? Q ` b i i ? 2 i B K 2 i ? 2 T T 2 ` B M [m 2 b i B Q M r b T m # H B b ? 2 / X U J B t 2 / @ b 2 M B Q ` K H 2 + Q @ m i ? Q ` ` 2 2 t + H m / 2 / X V

X8Xj _ iBQ Q7 72K H2 mi?Q`b

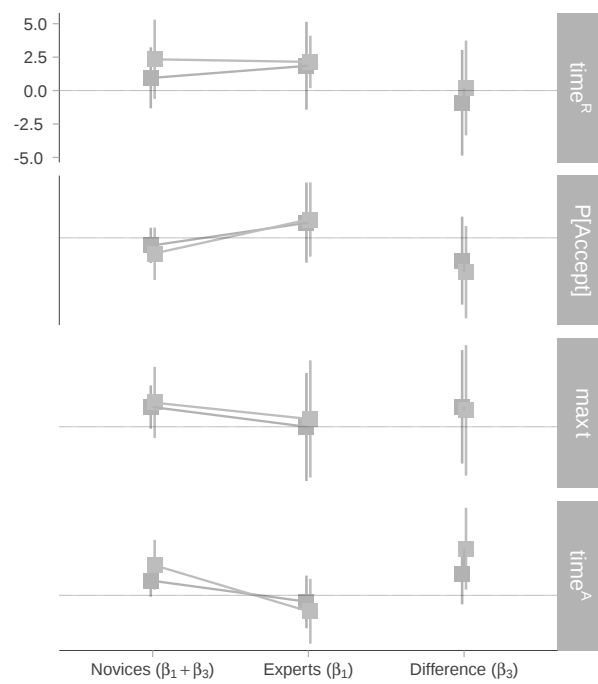
h #H2 Xe, R #H2BQ Q7 72K H2 mi?Q`b

	1[M X 8V		1[M X eW	1[M X dV	1[M X 3V		
	. vb bT2MirBi? `272`222Ti		LQX`QmM/bvb bT2MirBi?		mi?Q`b		
	URV	UkV	UjV	U9V	U8V	UeV	
72KX`iBQ	2:769 (2:187)	2:822 (2:249)	-0:018 (0:019)	0:074 (0:062)	15:227 (7:761)	15:625 (7:976)	
t U`QmM/V	-15:796 (0:982)	-12:415 (1:640)	0:362 (0:016)		-41:613 (2:341)	-28:514 (2:179)	
+Bi iBQMb U b-5:005V			0:002 (0:004)	0:010 (0:015)	-11:703 (1:804)		
R _{ijt} U`272`22öb`2+QKK2M/ iBQM V							
`2pBb2 UKBMQ`V		5:443 (1:805)					
`2pBb2 UK DQ`V		7:344 (2:287)					
D _{it} U2/BiQ`öb /2+BbBQM V							
`2pBb2 UK DQ`V		3:149 (3:231)				2:499 (7:498)	
`2pBb2 UKBMQ`V		2:760 (2:003)				5:636 (4:518)	
I _j UT`QKBM2M+2V					-1:338 (0:381)	-1:543 (0:287)	
D _{jt} 1 UK DQ`V						43:812 (4:224)	
LQX Q#bX	d-yye	d-yye	d-9jk	k-j9e	j-dN3	j-dN3	
R ²	yXy3R	yXye3	yXkd9	yXyjd	yXRR9	yXRjd	
"QmM/pW	(kX99- kXdd)	(kX89- kX3k)		(@yXyk- @yXyk)	(yXyd- yXyd)	(RjXj8	
J2 M /2TX p`X	8jXj8N	yXkdk		RXekk	dRXkjR	dRXkjR	
u2`	3	3	3	3	3	3	
LQi2XBiBK i2b`2B/2MiB+ HiQ R2Qb2BM?hi#H2 BM/2T2M/2Mi p`B #H2 72K H2 ? b #22M`2TH +QM iBMmQmb p`B #H2 2[m HiQ i?2`iBQ Q7 72K H2 mi?Q`b QM T T2`X - M/ bi iB 8W M/ RyW-`2bT2+iBp2HvX							



6 B;m`2 X8, 6-B;mB Q Q7 72K H2 mi?Q`b
 LQ i2 1biBK i2b `2 B/2MiB+ H iQ i?2 Q 72K H2 mi?Q`b
 +QM iB Mm Qmb p `B #H2 2[m H iQ i?2 `iB Q Q7 72K H2 mi?Q`b QM T T2`X

6 B;m`2 Xe, 6-B8ymT2`+2Mi 72K H2 mi?Q`b
 LQi2 1biBK i2b `2 B/2MiB+ H iQ i?Qb2BM?6Bim2 BM/2T2M/2Mi p`B #H2 72K H2 ? b #22M`2TH
 /mKKvp`B #H2 2[m H iQ R B7 i H2 bi 8y T2`+2Mi Q7 mi?Q`b `2 72K H2 M/y Qi?2`rBb2X UJBt2
 i? M 8y T2`+2Mi 72K H2 mi?Q`b `2 2t+Hm/2/XV



6 $B; m^2 \times d$, $\beta B; m^2$

""Qmmi2X
jk 2+QM QKB+b M/ }M M+2 DQm`M Hb- bmTTH2K2M

"XR GBbi Q7 DQm`M Hb

h #H"X R HBbib i?2 jk 2+QM QKB+b M/ }M M+2 DQm`MX kM/r2M/2Hb+b`B B M a2+a B Qi M
jXjXk"2+ mb2 DQm`M Hb #2; M K M ;BM; i?2B`bm#KBbbBQMbi?`Qm;? 11J i
Bb MQi # H M+2/ +`Qbb DQm`M H M/ v2 `X

h #H2 "XR, h?2 jk 2+QM QKB+b M/ }M M+2 DQjXj M kHb M Hvb2/ BM a

CQm`M H	u2 `b +Qp2`2/			
	am#KBbbBQm#HB+ iBQM v2 ` v2 ` P#bX			
1+QM QKB+ JQ/2HHBM;	ky y8 kyRN	ky ye kyRN		k-NRN
1+QM QKB+ avbi2Kb	ky y3 kyRN	ky yN kyRN		
1+QM QKB+b G2ii2`b	ky y9 kyRN	ky y9 kyRN		9-ed8
1m`QT2 M 1+QM QKB+ _2pB2r	ky yk kyRN	ky yj kyRN		R-kyd
1m`QT2 M CQm`M H Q7 SQHBiB+ H 1+QWQ KyR3	ky y8 kyRN	ky ye kyRN		
:HQ# H 6BM M+2 CQm`M H	ky R9 kyRN	ky R8 kyRN		
AMi2`M iBQM H _2pB2r Q7 1+QM QKB+b	ky RY/ 6BMNM+2kyRy kyRN			
C T M M/ i?2 qQ`H/ 1+QM QKv	ky y8 kyRN	ky y8 kyRN		
CQm`M H Q7 " MFBM; M/ 6BM M+2	ky yd kyRN	ky y3 kyRN		k-k8e
CQm`M H Q7 "2? pBQ` H M/ 1tT2`BK2M	ky y8 kyRN	ky y9 kyRN		
CQm`M H Q7 *QKKQ/Biv J `F2ib	ky R8 kyRN		8d	
CQm`M H Q7 *Q`TQ` i2 6BM M+2	ky y9 kyRN	ky y8 kyRN		
CQm`M H Q7 .2p2HQTk2Mi 1+QM QKB+b	ky y9 kyR3	ky y8 kyRN		
CQm`M H Q7 1+QM QKB+b h?2Q`v	ky Rj kyRN	ky Rj kyRN		
CQm`M H Q7 1+QM QKB+b M/ "mbBM2	ky ye kyR3	ky yd kyRN		
CQm`M H Q7 1KTB`B+ H 6BM M+2	ky y8 kyR3	ky ye kyRN		
CQm`M H Q7 1MpB`QMK2Mi H 1+QM QK	ky RY/ 6BMNM+2kyRy kyRN			
CQm`M H Q7 6BM M+B H AMi2`K2/B iBQM	ky Rj kyR3	ky Rj kyRN		
CQm`M H Q7 6BM M+B H ai #BHBiv	ky ye kyR3	ky ye kyRN		
CQm`M H Q7 >QmbBM; 1+QM QKB+b	ky ye kyR3	ky ye kyRN		
CQm`M H Q7 AMi2`M iBQM H 1+QM QK	ky yd kyR3	ky yd kyRN		
CQm`M H Q7 J +`Q2+QM QKB+b	ky y8 kyRN	ky ye kyRN		
CQm`M H Q7 J i?2K iB+ H 1+QM QKB+b	ky y8 kyRN	ky ye kyRN		
CQm`M H Q7 JQM2i `v 1+QM QKB+b	ky y9 kyRN	ky y8 kyRN		
CQm`M H Q7 JmHiBM iBQM H 6BM M+	ky y8 kyR3	ky y8 kyRN		
CQm`M H Q7 i?2 C T M2b2 M/ AMi2`M	ky yd kyR3	ky yd kyRN		
LQ`i? K2`B+ M CQm`M H Q7 1+QM QK	ky yd kyR3	ky yd kyRN		
S +B}+@" bBM 6BM M+2 CQm`M H	ky ye kyRN	ky yd kyRN		
_2;BQM H a+B2M+2 M/ l`# M 1+QM QK	ky yd kyRN	ky y3 kyRN		
_2b2 `+? BM AMi2`M iBQM H "mbBM2	ky yd kyR3	ky ye kyRN		
_2bQm`+2 M/ 1M2`;v 1+QM QKB+b	ky y8 kyR3	ky yd kyRN		
_2bQm`+2b SQHB+v	ky yd kyRN	ky y3 kyRN		

LQ i26B`bi+QHmKM HBbib i?2 DQm`M Hb /2b+`B#2 B M/ M Hvb2/ BM a2+iBQM b

C Yh"B•D5T UÐ P € €°

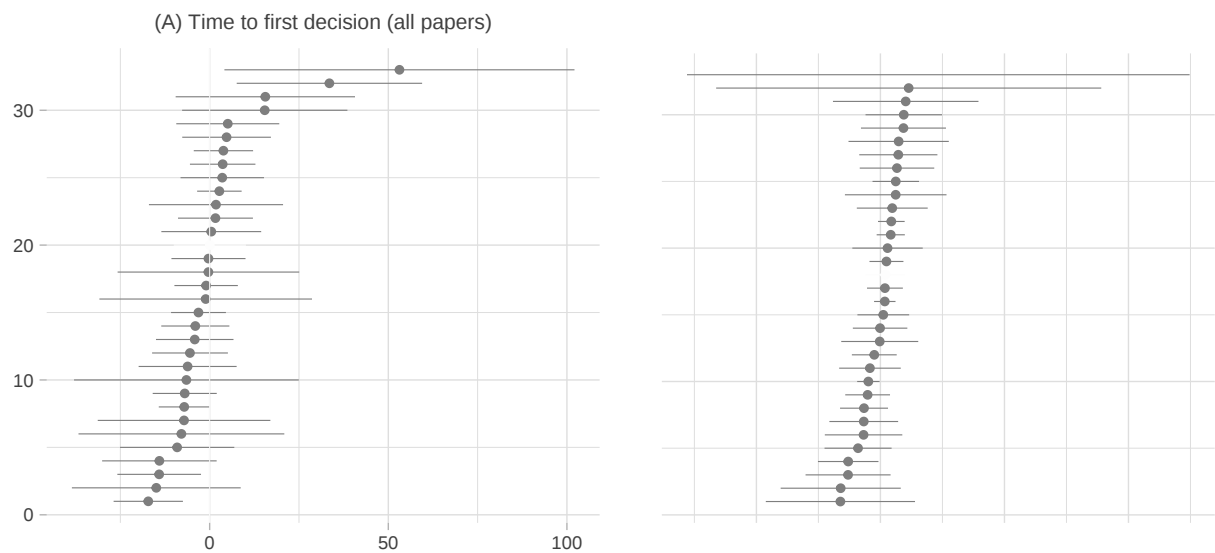
6B;m`2 "XR, amKK `v bi iBbiB+b QM K Mmb+`BTib Tm#HBb?2/ BM jk 2+QM
LQiX :` T? U V /BbTH vbi?2 irQ@v2 `KQpBM; p2` ;2 Q7 i?2 T2`+2Mi ;2 Q7 T T2`b Tm#HBb?2/ M
72K H2 +Q`2bTQM/BM; mi?Q`c :` T? U"V Bb i?2 irQ@v2 `KQpBM; p2` ;2 Q7 i?2 iQi H MmK#
M/ bm#KBii2/ 2 +? v2 `X :` T?b U*V M/ U.V THQi i?2 /Bbi`B#miBQM Q7 `QmM/b #v +Q`2bTQM
MmK#2` Q7 `QmM/b T2`v2 `UirQ@v2 `KQpBM; p2` ;2V-`2bT2+iBp2HvX :` T?b U1V M/ U6V
7`QK bm#KBbbBQM iQ }`bi•iQ

"Xk

VMiG`i2PÀiQ?2@F0HÝ@•đÀ`Q @ÀiPBIM2[@H?HOL6B gmm`2M/2 p€ €`€đp H2MTHg`2pbBQ2
"Xj` :2M/2` ; T ?2i2`Q;2M2Biv +`Qbb DQm`M Hb

6B;m "Xk 1 THQi i?2 +Q2{+B2Mi QM 72K H2 7`QK`2;`2bbBQM b B/2MiB+ HiQ i?
k2t+2Tii? ib KTH2b `2`2bi`B+i2/iQ Q#b2`p iBQM b 7"Xk bBK B+ mHhv`TDiQmb`M
i?2 ;2M/2` ; T BM iQi H iBK2 mM/2` `2pB2r 7`QK i?2 b K2`2;`2bbBQM mb2/
h #H X KU TT2M./BX h?2 +Q2{+B2Mi QM 72K H2 r?2Mi?21M X T;H2 BQ MBK BB-bi2/i
?B;?HB;?i2/ BM`2/ QM7Q +P?2`2?bQM b /Bb+m b X 26B;M XZ Qi2BQM Qi B/2MiB7v
i?2 Qi?2`jk DQm`M HbX

h?2`2 Bb [mBi2 #Bi Q7 ?2i2`Q;2M2Biv +`Qbb DQm`M Hb BM ;2M/2` ; Tb BM
M/ T `iB+mH `àh o8•E` `FÐÐ€đi•r?28P- € À°@€h ođ° €Ðđ€hM €rT @m-/ 6B;m`



6B;m`2 "Xk, :2M/2` ; T ?2i2`Q;2M2Biv +`Qbb DQm`M Hb

LQix 6B;m`2b U V U1V THQi i?2 +Q2{+B2Mi QM 72K H2 7`QK `2;`2bbBQMb BK2M4BTiH iQ i?Qb2

i? i b KTH2b `2 `2bi`B+i2/iQ Q#b2`p iBQMb 7`QK T"XiBbBKiBHD`Qm`TH Qbb iQ2;2M/2`; T BM iQ

iBK2 mM/2` `2pB2r 7`QK i?2 b K2 `2;`2bbBQM mb2/ iQ 2bXBUK T2 2QbYK MbURV iQ1M2Q;H2

1+QMqKB2`B;?HB;?i2/ BM `2/X " M/b`2T`2b2Mi NyW +QM}/2M+2 BMi2`p HbX

"X9 mi?Q` ;2M/2`- iQi H `QmM/b M/ iBK2 iQ }`bi /2+BbBQM

h #H2 "Xk, *Q``2H iBQM #2ir22M `QmM/b Q7 `2pB2r M/ iBK2 iQ }`bi

	jk 2+QMX M/ }M M+2 DQmM;Hh+QM QKB+b				
	+Q``X	mi?Q`	bQHQ	mi?Q`	+Q``X mi?Q` bQHQ mi?Q`
	URV	Ukv	UjV	U9V	
72K H2	7:007	15:955	18:783	61:979	
	(3:290)	(5:775)	(13:631)	(27:443)	
maxt	-7:852	-7:188	-14:570	-7:272	
	(1:916)	(2:320)	(3:099)	(7:604)	
+Bi iBQM b U b B4699/	-5:334	-27:417	-27:740		
	(1:014)	(1:370)	(2:385)	(6:346)	
72K xH2xt	-3:438	-8:060	-10:042	-40:207	
	(2:287)	(3:845)	(6:364)	(12:583)	
LQX Q#bX	k9-8RR	e-8jk	k-j8N	99d	
R ²	yXRdy	yXRdy	yXRR8	yXRj8	
J2 M /2TX p `X	RjyX9Nj8	Xk9e	R8kX9Nj	R8kXddy	
CQm`M H	3	3			
u2 `	3	3	3	3	

* ++QmMiBM; 7Q` //BiBQM H +QMi`QH p `B #H2b

*XR 1/BiQ` }t2/ 2z2+ib

h #H~~2XR~~M/ 6B;m~~XR~~2THB+ i2~~R~~h M~~H~~B; ~~η~~`22bT2+iBp2Hv- #mi BM+Hm/2 }t2/ 2z
? M/HBM; 2/BiQ`bX

_2bmHib BM~~XR~~M~~H~~B;m~~XR~~2`2 p2`v bBKBH `iQ i?~~Q~~M/ B~~B~~; ~~η~~`22bT2+iBp2HvX

6B;m`2 \*XR, j6B;Q~~M~~2`QH HBM; 7Q` 2/BiQ` }t2/ 2z2+ib
LQi~~2~~ :` T? Bb B/2MiB+ H-iQt6B; ~~η~~m`2bmHib +QMi`QH 7Q` 2/BiQ` }t2/ 2z2+ibX

h #H2 *XR, R #QMi`QH HBM; 7Q` 2/BiQ` }t2/ 2z2+ib

	1[M X W	1[M X eW	1[M X dW	1[M X W		
	. vb bT2MirBi?`27Q`222]Ti	LQX`QmM/bvbbT2MirBi?	mi?Q`b			
	URV	UkV	UjV	U9V	U8V	UeV
62K H2 +Q`2bTQM/BM; mi?Q`b						
72K H2	4:506	4:642	-0:026	0:083	10:623	10:476
	(1:592)	(1:608)	(0:014)	(0:044)	(5:259)	(5:418)
t U`QmM/V	-15:069	-10:912	0:364		-42:603	-28:316
	(0:901)	(1:518)	(0:016)		(2:380)	(2:190)
+Bi iBQM b U b	4:706		0:004	-0:017	-12:261	
	(0:837)		(0:004)	(0:014)	(1:796)	
Rijt U`272`22öb`2+QKK2M/ iBQM V						
`2pB bV						
`2pB bV ‡•Đ						

*Xk _272`22 }t2/ 2z2+ib

h #H*~~X~~K 2THB+ i2b~~R~~#m#H2M+Hm/2b }t2/ 2z2+ib 7Q` 2 +? `272`2~~2~~~~X~~j~~0~~2Bb+mbb2
MmK#2` Q7 `272`22b r?Q`2pB2r2/ bQHQ@ mi?Q`2/ T T2`b #v #Qi? b2t2b Bb b
++QmMiBM; 7Q` `272`22 }t2/ 2z2+ib r?2M `2bi`B+iBM; i?2 b KTH2 iQ bQHQ
T M2H Q7 ~~*X~~#~~H~~2`27Q`2 +QKT `2b bQHQ 72K H2@ mi?Q`2/ T T2`b iQ T T2`b
mi?Q`bX :Bp2M i?2 H `;2 MmK#2` Q7 }t2/ 2z2+ib- r2 HbQ /~~Q~~XMQi 2biBK i2 P
Hi?Qm;? `2bmH~~\*X~~B~~2~~ b Q~~K~~2r? iKQ`2 MQBbBHv 2biBK i2/ `~~R~~H +B~~Q~~2mi~~Q~~i~~P~~Q;b2 B
7Q` `272`22 }t2/ 2z2+ib /Q2b MQi TT2 `iQ ? p2 K2 MBM;7mH BKT +iQM i?2
Q7 T22` `2pB2rX

h #H2 *Xk, R #102Mi`QH HBM; 7Q` `272`22 }t2/ 2z2+ib

	1[MX8W . v b b T 2 M i r B i ? ` 2 7 2 ` 2 2 } t 2 / 2 z 2 + i b	1[MXeW P 2 ` 2 2 2 } t 2 / 2 z 2 + i b	1[MXdW L Q X ` Q m M / b b b T 2 M i r B i ?	1[MX3W m i ? Q ` b		
	U R V	U k V	U j V	U 9 V	U 8 V	U e V
62 K H 2 + Q ` ` 2 b T Q M / B M ; m i ? Q ` b						
7 2 K H 2	3:795	3:521	−0:027	0:084	17:593	16:276
	(1:559)	(1:558)	(0:021)	(0:080)	(17:156)	(17:458)
t U ` Q m M / V	−13:847	−10:068	0:446		−46:310	−42:056
	(1:361)	(2:242)	(0:017)		(7:044)	(7:802)
+ B i i B Q M b U b − B M 1 3 V			0:002	0:019	−11:782	
	(1:103)		(0:005)	(0:026)	(4:600)	
Rijt U ` 2 7 2 ` 2 2 ö b ` 2 + Q K K 2 M / i B Q M V						
` 2 p B b 2 U K B M Q ` V		7:995				
		(1:506)				
` 2 p B b 2 U K D Q ` V		7:179				
		(1:796)				
Dit 002 / B i Q ` @ b / 2 + D S • X − d 1 − d ñ C ' • 2 % f O F Û p + G p B b 2 1 1 1 1						

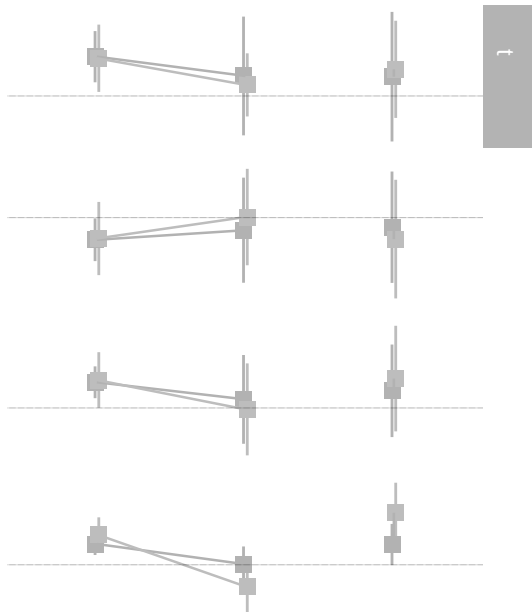
*Xj C1G+Q/2 }t2/ 2z2+ib

h #H*~~X~~j M/ 6B;~~m~~~~X~~~~2~~THB+ i2~~R~~hM#H6~~B~~;j~~m~~#~~m~~i BM+Hm/2 }t2/ 2z2+ibC71~~Q~~~~Q~~/22+bQM/ `v
"2+ mb2 72r +Q/2b +QMi BM MQM@M2;HB;B#H2 MmK#2` Q7 bQHQQ@ mi?Q`
i?2 #QiiQK T M2H*~~Q~~~~j~~+~~Q~~~~K~~H22b bQHQQ@72K H2 mi?Q`2/ T T2`b iQ T T2`b #v K
mi?Q`bX U\_2bmHib 7Q` bQHQQ@72K H~~2~~@`2mi~~H~~Q2 2/v T 2T2`iB~~2~~2Mi Q BT; nT`22`b #v K
+Q``2bTQM/BM; mi?Q~~9~~~~b~~~~X~~j~~v~~22 a2+iBQM

_2bmHib B~~M~~~~X~~~~j~~ M~~H~~~~Q~~B;~~m~~~~X~~~~2~~`2 bBKBH `iQ i?Q~~B~~2MB~~Q~~B;~~j~~~~m~~H2i?Qm;? i?2 +Q2{+B2Mi
QM 72K H2 Bb bK HH2` M/ KQ`2 MQBbBHv 2biBK i2/ BM i?2 #QiiQK T M2H Q

*X9 mi?Q`bö BMbiBimiBQM H` MF

h #H~~2~~9M/ 6B; ~~mX2~~2THB+ i2Rm#H2B; ~~j#2~~ni BM+Hm/2 }t2/ 2z2+ib 7Q`i?2` MF Q7
BMbiBimiBQMb BM i?2 }2H/b Q7 2M2`;v 2+QM QKB+b M/ }M M+2X _ MFBM;
K Mmb+`BTib Tm~~1#M2~~b92/+QM QKB+bQ`2bTQM/BM; mi?Q` {HB i2/ rBi? i?2 B
q2 i?2M ;`QmT2/ BMbiBimiBQMb BMiQ }p2`Qm;?Hv 2[m HHv bBx2/ ;`QmTbX
_2bmHib BM~~X9~~MH0B; ~~mX2~~`2 bBKBH`iQ i?Qb2`2TQM/6BM~~X2~~#H2



6B;m`2 \*Xj, 6B+iQMi`QH HBM; 7Q` BMbiBimiBQM H` MF }t2/ 2z2+i
LQiX :` T? Bb B/2MiB+ H-iQt6B;Tm`2H`2bmHib +QMi`QH 7Q` BMbiBimiBQM H` MF }t2/ 2z2+ibX

h #H2 *X9, R #Q2Mi`QH HBM; 7Q` mi?Q`bö BMbiBimiBQM H` MF

	1[MXW vb bT2MirBi?`272`22öb`2+QKK2M/ iBQM V		1[MXeW UjV	1[MXdW U9V	1[MX3W U8V	1[MX3W UeV	mi?Q`b
	URV	UkV	UjV	U9V	U8V	UeV	
62K H2 +Q`2bTQM/BM; mi?Q`b							
72K H2	4:392 (1:629)	4:467 (1:648)	-0:028 (0:014)	0:096 (0:046)	10:645 (5:338)	10:311 (5:515)	
t U`QmM/V	-15:896 (0:969)	-12:723 (1:611)	0:363 (0:016)		-41:906 (2:341)	-28:839 (2:177)	
+Bi iBQM b U b-5M40V			0:002 (0:004)	0:017 (0:015)	-11:388 (1:830)		
Rijt U`272`22öb`2+QKK2M/ iBQM V							
`2pBb2 UKBMQ`V		5:462 (1:792)					
`2pBb2 UK DQ`V		7:173 (2:276)					
Dit U2/BiQ`öb/2+BbBQM V							
`2pBb2 UK DQ`V		2:738 (3:175)				2:487 (7:482)	
`2pBb2 UKBMQ`V		2:649 (1:978)				5:403 (4:505)	
Ij UT`QKBM2M+2V					-1:014 (0:345)	-1:156 (0:292)	
Djt 1						43:528 (4:204)	
LQX Q#bX	d-y99	d-y99	d-9dj	k-j8N	j-3RN	j-3RN	
R ²	yXy3j	yXydk	yXkd8	yXy9k	yXRR8	yXRj3	
"QmM/bW	(9Xye-9XjN)	(9XkR-9X9d)		(@yXy9-	@yXyj)	(yXy3- yXRy)	(3Xe
J2 M/2TX p`X	8jXk8jXk3y	yXkdk		RXekk	dRXkyN	dRXkyN	
aQH Q@ mi?Q`2/ T T2`b							
72K H2	9:280 (4:150)	8:550 (4:256)	-0:005 (0:035)	0:043 (0:122)	29:518 (17:058)	28:848 (17:354)	
t U`QmM/V	-12:228 (1:298)	-8:640 (1:810)	0:331 (0:029)		-35:272 (5:473)	-27:822 (5:640)	
+Bi iBQM b U b-4M97V			0:001 (0:009)	-0:015 (0:041)	-5:257 (2:654)		
Rijt U`272`22öb`2+QKK2M/ iBQM V							
`2pBb2 UKBMQ`V		9:787 (4:226)					
`2pBb2 UK DQ`V		12:682 (4:557)					
Dit U2/BiQ`öb/2+BbBQM V							
`2pBb2 UK DQ`V		-0:749 (6:116)					
`2pBb2 UKBMQ`V		3:906 (5:130)					
Ij UT`QKBM2M+2V					-4:043 (1:591)	-3:864 (1:530)	
Djt 1						30:214 (8:657)	
LQX Q#bX	R-kd8	R-kd8	R-j8y	99d	d99	d99	
R ²	yXydy	yXye3	yXkej	yXyee	yXRY9	yXRR8	
"QmM/bW	(NXk3- NXej)	(3XR9- 3X88)		(@yXyR-	@yXyR)	(yXyR- yXy9)	(kjX
J2 M/2TX p`X	8jXj8jXjN8	yXk98		RXeeN	edXkkd	edXkkd	
u2`	3	3	3	3	3	3	
AMbiX`MF	3	3	3	3	3	3	

LQi2KbiBK i2b`2B/2MiB+ HiQ iR2ib2Bim i#H2H`2bmHib+QMi`QH 7Q`i?2`MF Q7 mi?Q`bö
- M/ bi iBbiB+ HHv bB;MB}+ Mi i RW- 8W M/ RyW-`2bT2+iBp2HvX

h #H2 *X8, R #Q2M`QHBM; 7Q`i?2 óT`QKBM2M+2ô Q7 i?2 KQbi T`QKB

	1[Mx8W vb bT2Mi rBi?`272`222]Ti	1[MxeW LQX`QmM/b	1[MxdW LQX`QmM/b	
	URV	UkV	UjV	U9V
62K H2 +Q`2bTQM/BM; mi?Q`b				
72K H2	3:752 (1:617)	3:720 (1:635)	-0:026 (0:014)	0:096 (0:046)
t U`QmM/V	-15:964 (0:967)	-13:143 (1:574)	0:363 (0:016)	
+Bi iBQMb U b-4:179V			0:000 (0:004)	0:018 (0:015)
Ij UT`QKBM2M+2:007		-0:955 (0:192)	0:003 (0:001)	-0:009 (0:003)
Rijt U`272`22öb`2+QKK2M/ iBQM V				
`2pBb2 UKBMQ`V		5:669 (1:774)		
`2pBb2 UK DQ`V		7:168 (2:267)		
Dit U2/BiQ`öb /2+BbBQM V				
`2pBb2 UK DQ`V		1:655 (3:085)		
`2pBb2 UKBMQ`V		2:290 (1:949)		
LQX Q#bX	d-y99	d-y99	d-9dj	k-j8N
R2	yXy3d	yXydN	yXkde	yXy9y
"QmM/pW	(kXde-jXd8)	(kXdy-jXdk)	(@yXyj-	@yXyj) (yXy3-yXRy
J2 M /2TX p`X	8jXk8jXk3y	yXkdk	RXekk	
aQHQ@ mi?Q`2/ T T2`b				
72K H2	8:497 (4:013)	7:610 (4:115)	-0:002 (0:035)	0:034 (0:125)
t U`QmM/V	-12:383 (1:306)	-9:450 (1:808)	0:331 (0:029)	
+Bi iBQMb U b-3:100V			-0:003 (0:009)	-0:006 (0:041)
Ij UT`QKBM2M+2:181		-1:543 (0:476)	0:013 (0:004)	-0:045 (0:012)
Rijt U`272`22öb`2+QKK2M/ iBQM V				
`2pBb2 UKBMQ`V		9:629 (4:187)		
`2pBb2 UK DQ`V		12:870 (4:515)		
Dit U2/BiQ`öb /2+BbBQM V				
`2pBb2 UK DQ`V		-270032004b001c00480032>]TJ /F30 8.9664 Td96.048 0 Td[(3)TdF32 8		

*Xe LmK#2` Q7 +Q@ mi?Q`b

h #H2*XdM/*X3M/ 6B; mX22THB+ i2 i?2 iQT ? H2M/k Mh6B; m`22bT2+iBp2Hv-
#mi +QMi`QH 7Q` i?2 MmK#2` Q7 +Q@ mi?Q`b QM T T2`X \_2bmHib `2 p2`v
R M/k M/ 6B; jX2

h #H2 *Xd, R U#Q2 T M2HV- +QMi`QH HBM; 7Q` MmK#2` Q7 +Q@ m

1[MX8W	1[MXeW
. vb bT2MirBi? `272`222Ti	

h #H2 *X3, hU#QZ T M2HV- +QMi`QH HBM; 7Q` MmK#2` Q7 +Q@ m

hBK2 iQ	LQX`QmM/b	hBK2 7`QK }`bi
}`bi /2+BbBQM	haxtV	iQ }M H /2+BbBQM

h # H2 * X R y , R h # H2

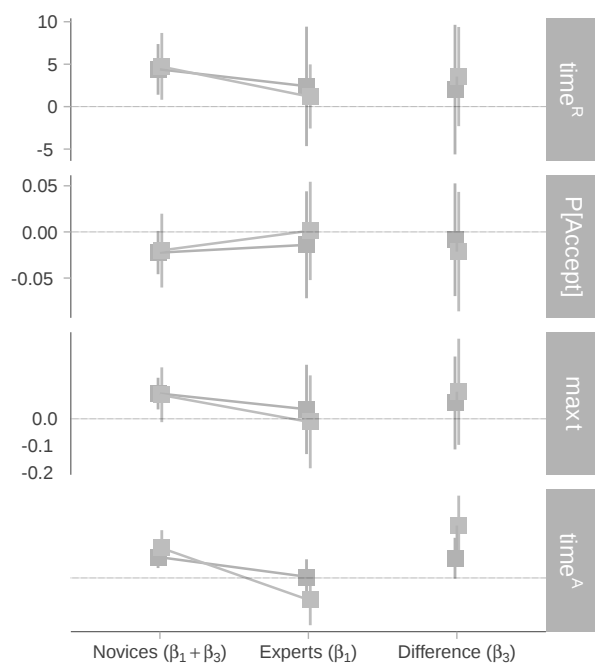
h #H2 *XRR,kh+#QMi`QHhBM;7Q`K Mmb+`BTiH2M;i?

	hBK2 iQ } `bi /2+BbBQM		LQX `QmM/b hBK2 7`QK } `bi iQ }M H /2+BbBQM		maxt`b1
	maxt ≤ 1		maxt V		
	HH T T2`b	HH T T2`b	HH T T2`b	HH T T2`b	
	URV	Ukv	UjV	U9V	U8V
62K H2 +Q`2bTQM/BM; mi?Q`b					
72K H2	0:325 (0:369)	3:487 (1:681)	0:042 (0:021)	13:638 (2:754)	4:873 (2:217)
+Bi iBQM b U bB5M70V	−4:512 (1:008)	−4:512 (1:432)	0:014 (0:008)	−11:771 (2:827)	−4:243 (1:629)
MQX T ;2b	0:269 (0:310)	0:169 (0:297)	0:003 (0:003)	2:522 (0:662)	2:364 (0:316)
maxt				93:369 (8:163)	
T`QKBM2M+2				−0:721 (0:347)	−0:784 (0:271)
LQX Q#bX	k9-8RR	Ry-dy3	k9-8ey	kj-Nyd	Ry-y3j
R ²	yXRee	yXkRy	yXkkN	yX9Ry	yXk8j
"QmM/b U72K H2V	(yXjk- jXj9)	(jX9N- eXkd)	(yXy9- yXy9)	(NX38- RjXe	
J2 M /2TX p`X	RjyX88d	RXddN	kR9XN89	RRkXjRR	
aQHQ@ mi?Q`2/ T T2`b					
72K H2	−0:109 (3:077)	8:324 (5:086)	0:078 (0:023)	20:446 (5:142)	11:295 (7:198)
+Bi iBQM b U bB5M70V	−5:538 (1:374)	−5:538 (1:902)	0:029 (0:007)	−12:335 (3:133)	−4:823 (2:128)
MQX T ;2b	0:622 (0:321)	0:266 (0:334)	0:001 (0:004)	2:747 (0:882)	2:907 (0:590)
maxt				95:918 (10:293)	
T`QKBM2M+2				−6:012 (1:528)	−3:474 (0:815)
LQX Q#bX	e-8jk	k-3de	e-88j	e-j3y	k-dR8
R ²	yXRed	yXkjj	yXkeR	yX9k9	yXk3R
"QmM/b U72K H2V	(@yXRR- RX3j)	(dXjR- 3Xjk)	(yXyd- yXy3)	(3Xee- ky	
J2 M /2TX p`X	Rj3X88d	RXdd3	ky3XyR9	RykXyR9	
CQm`M H	3	3	3	3	3
u2 `Đ ĐÄ€	3	3	3		

v

U0

RkdX88d



$6B; m^2 * Xe, j6B; QM2`QH HBM; 7Q`K Mmb+`BTi H2M; i?$
 $LQ iX :`T? Bb B/2MiB+ H-iQt6B;Tm`BH`2bmHib +QMi`QH 7Q`K Mmb+`BTi H2M; i?X$

. *mKmH iBp2 ;2M/2` ; Tb BM iBK2 bT2Mi BM `2pB2r
h #H2XRM/.Xk2biBK i2 i?2 ;2M/2` ; T BM i?2 iQi H MmK#2` Q7 /1w2b;Tv2Mi mM/
1+QMqKB+b

h # H2 .XR, :2M/2` ; Tb BM +mK mH iBp21iB2`2m1+QMQpB2b i

	. vb rBi? `272`22		. vb rBi? mi?Q`b		hQi H / vb	
	URV	UkV	UjV	U9V	U8V	UeV
62K H2 +Q`2bTQM/BM; mi?Q`b						
72K H2	8:826	7:429	24:042	21:120	33:162	29:375
	(2:807)	(2:686)	(9:022)	(9:175)	(13:119)	(13:822)
+Bi iBQM b U b-7100V			-19:124		-53:058	
	(1:326)		(3:083)		(4:666)	
Rij0 U`272`22öb BMBiB H`2+QKK2M/ iBQM V						
`2pBb2 UKBMQ`V		7:787				
		(4:183)				
`2pBb2 UK DQ`V		42:287				
		(4:555)				
`2D2+i		21:957				
		(6:458)				
Di0 U2/BiQ`öb BMBiB H /2+BbBQM V						
`2pBb2 UK DQ`V		-66:370		135:266		131:223
		(39:672)		(7:865)		(30:649)
`2pBb2 UKBMQ`V		-73:632		70:760		15:228
		(38:500)		(7:892)		(32:084)
Ij UT`QKBM2M+2V			-1:853	-2:187	-4:306	-6:023
			(0:494)	(0:394)	(1:059)	(0:762)

LQX Q#bX:

h #H2 .Xk, :2M/2` ; Tb BM +mKmH iBp2 iBK2 mM/2` `2pB2r ijk 2+QMqKB+

	62K H2 +Q``X	mi?Q` 62K H2 bQHQ@ mi?Q`2/
	URV	UkV
72K H2	18:191 (3:519)	29:416 (5:922)
+Bi iBQM b U bBM	24:360 (3:622)	-14:133 (3:775)
T`QKBM2M+2	-1:322 (0:494)	-5:750 (1:783)
LQX Q#bX	k9-8Ry	e-8jk
R ²	yXjye	yXjRy
"QmM/b U72K H2V	(R3XRR{KX8-NX9k)	
J2 M /2TX p `X	jjNX3R8	j9yXNdy
CQm`M H	3	3
u2 `	3	3

LQi20B;m`2b +Q``2bTQM/ iQ +Q2{+B2Mib 7`QK `2;`2bbBM; i?2 /Bz2`@
2M+2 #2ir22M T T2`öb bm#KBbbBQM M/ }M H ++2Ti M+2 / i2b QM i?2
HBbi2/ p `B #H2bX AM +QHmKM URV- r2 T`Qtv 7Q` ;2M/2` mbBM; i?2 ;2M/2`
Q7 i?2 +Q``2bTQM/BM; mi?Q`c BM +QHmKM UkV- r2 +QKT `2 bQHQ@72K H2
mi?Q`2/ T T2`b iQ bQHQ@K H2@ mi?Q`2/ T T2`bX ai M/ ` / 2`Q`b +Hmb@
i2`2/ #v DQm`M H M/ mi?Q`bö +QmMi`B2b BM T `2Mi?2b2bX - M/
bi iBbiB+ HHv bB;MB}+ Mi iRW- 8W M/ RyW- `2bT2+iBp2HvX

1 :2M/2` ; Tb BM +Bi iBQMb

h #H2X RBbTH vb +Q2{+B2Mib 7`QK `2;`2bbBQM Q7 +Bi iBQMb U bBM?V QM
T`QKBM2M+2- MmK#2` Q7 mi?Q`b M/ DQm`M H M/ v2 `}t2yKz2QibXUa22>
2tTH M iBQM M/ DmbiB}+ iBQM Q7 i?Bb bT2+B}+ 1iBQ`MXV+Q2MqKB32M HvbB
//BiBQM Hjk 2+QMqKB+b M/ }M M+2 DQm`M Hb `2 b?QrM BM i?2 }`bi M/ b
+QHmKMb URV M/ UjV- 72K H2 mi?Q`b?BT Bb /2}M2/ b ? pBM; 72K H2 +Q
UkV M/ U9V r2 +QKT `2 bQHq 72K H2@ mi?Q`2/ T T2`b iQ bQHq K H2@ mi?

h #H2 1XR, :2M/2` ; Tb BM +Bi iBQMb U bBM?V

	1M2`;v 1+QMqKB+b+QMX M/ }M M+2 DQm`M Hb			
	72KX +Q``X		72KX bQHq	
	URV	UkV	UjV	U9V
72K H2	-0:037 (0:062)	0:287 (0:156)	0:040 (0:027)	0:057 (0:033)
Tj UT`QKBM2M+2060	0:060 (0:006)	0:120 (0:024)	0:028 (0:003)	0:043 (0:010)
MQX mi?Q`b	0:041 (0:020)		0:209 (0:021)	
LQX Q#bX	k-j8N	99d	k9-893	e-88j
R ²	yX93e	yX9kj	yXkd3	yXk98
J2 M /2TX p `XkXe8j		kXedy	kX39e	kX999
CQm`M H			3	3
u2 `	3	3	3	3

LQi2IX #H2 /BbTH vb +Q2{+B2Mib 7`QK `2;`2bbBQM Q7 +Bi iBQMb U bBM?V QM
mi?Q`b?BT- +Q@ mi?Q`T`QKBM2M+2- MmK#2` Q7 mi?Q`b M/ DQm`M H M/ v2 `}
72+ibX ai M/ `/ 2`Q`b +Hmbi2`2/ #v K Mmb+`BTiU} `bi T M2HV M/ DQm`M H M/ n
+QmMi`v Ub2+QM/ T M2HV BM T `2Mi?2b2bX - M/ bi iBbiB+ HHv bB;MB}+ M
8W M/ RyW- `2bT2+iBp2HvX

qBi? i?2 2t+2TiBQM Q7 +QHmKM URbm; 22bmi H?bi B7M Kh #2i@ mi?Q`2/ T T2`b `
KQ`2 i? M K H2@ mi?Q`2/M2 T; 2`b+QM Q72B;+B Bb kN HQ; TQBMib KQM; bQHq
T T2`bX ii?2 Qi?2` DQm`M Hb- Bi Bb 9 e HQ; TQBMibX

_272`2M+2b

*`/- .X2i HXkykyVX ó`2`272`22b M/2/BiQ`b BM 2+QM QKB+b ;2M/2` M2mi`