

W]XFYb U]Y)!&nUfgfl. 6YH7= 7cbZXBW-bhfj UzG6D Gngc JW 6ccXDFgg fV86D.8 J]gic JW6'ccXDFgg fY'

GfX]b]Ub W]XFYb U]YX%%' mUfg' H'YfZcFYdfYgbhgi XmWbWfg k]h dfy Jci ggi X]gcb h YUggVU]cb cZB 7 UbXA I 57 k]h 6D'

Discussion

H Y FYUjcbg]d' VfkYb' Ubh.fcdca Yf]W]bX]Wfcg UbX 6D Jg la dcfUhb]b' y Ui U]b] 'h Y \UH' cZW]XFYb UbXUc' YgWb]g'gbW WfXcj U]W'Uf Umbca U]h]g'fYVW'a]b] 'a cfYW'a a cb'h YgYXhg' -b'h Jg dfYgbhgi Xnz k Y Zi bX h Uih Y dfy UybW cZi bXfk Y] \h f]y YfZa cXfUY'UbXa]Xk Ug' \ \ k \ Ycj Yfk Y] \h Ux cVg' Vm 6A = k Ug' ck' la cb] gi h Yg' W]XFYb" B7' UbX A I 57' g] b]Z]Wbhm X]g]Ma]bUHX Veng' k]h' Vch' \ \ \ ' G6D' UbX 86Dz k \ Y] b']f g B7' UbX A I 57' cb]m]XbhZ]YX \ \ \ ' G6D' < ck y Yz 6A = X]g]Ma]bUHX Veng' k]h' cb]n \ \ \ ' G6D'

-b'h Jg gi Xnz Ya YUj fYXB 7 UbXA I 57' hc X]g]M]Vi bXfk Y] \h XZ]bYX Vm6A = "K Y fYw'a a YbX h Uih YUW' W'i blfma i gi X]M]fa]bY h Yf' ckb' W]rcZdc]blg Zcf' B7ZA I 57' UbX 6A = "K \ Y] h Y i g' cZ 6A = Ug Ug ffc] UY Zf' Zh X]g]f]V h]cb' Ua cb] W]XFYb fUg g' X]M]h' g' B7' UbX A I 57' UY]bW]M]g]b] m'fYw]b]n]X' Ug U i gZ' \]bX] Yg fYZ]h] Y cZVch' Zh X]g]f]V h]cb' UbX f]g' cZa YUc']W]g]b]Xca Y' H Y d]fa Ufm Wb]f]V h]cb' cZ h Jg dfYgbh gi Xnk Ug' h Uih Vch' B7' UbX A I 57' Wb' Yg' V]h] h XZ'f' cbY Ucb h Y' Ug' Ub X]h]cb U' Y Ui U]cb]cc' b] h h' 6A =]b' X]M]b] ' i bXfk Y] \h]b' h Y 9']g Ug' fi fu W]XFYb"

H Y fYg']g g' ck YXUg fcb] ' d' cgl] Y g] b]Z]Wb]U]g' V]h]cb Vfk Yb 6D' UbX Ubh.fcdca Yf]W]bX]Wfcg fb 7' UbX A I 57' E]b' h Jg g'a d' Y hci \ \ h Y Ugg' V]h]cb' cZ 86D' UbX B7' X]g]dd]YfXU]Zf' U]i ga Yb]g Zcf' U]Y Ubx']bX]f' Ga]U' Z]b]b]g' Xc' Y]g]h]b']h]Uih fYh U]g ddcf]g ci f' fYg']g O' Q < ck y Yz]h]g'a g' h Uih Y dfy UybW cZcj Yk Y] \h cVg]h]m]bX' \ \ \ ' 6D' cZ h Y V]h]X' gi X]g' k Yf' \ \ \ ' Wa dUfYXk]h' h Y WffYb]h gi Xnz k]W]g' ck YX' \ \ \ ' dfy UybW cZi bXfk Y] \h f]HUV Y &' H Yg' X]Z]f]bWg' a Uih Y X' Y h' h Y Z]M]h Uih c' g' gi X]g' k Yf' Wff]YX' ci h]b' X] YcdYX' W'i blf]g']b' Wb]f]g]h' c' f' gi Xnk \ W]]g Y W] g' Ym V]g' X' cb' i bX]f]Yg' ci fW'X' fi fu' g' h]b] g' 5 W]f]X]b']c K < C' &S' Q' h Y dfy UybW cZcj Yk Y] \h c' cVg]h]m]b]W]Ug' Ug U W'i blf]m]X] Ycdg' -h]g' d' cgg] VY h Uih bck U]g' h Y Ucf]a Yb]h]cb' X WUb] Yg' UbX X] Ycda Yb]g']b' Cei h' 5 Z] W] \ U Y fYg' h X]b']bW]Ug' X dfy UybW cZcj Yk Y] \h Ubx cVg]h]m]g' Q

: Yk' gi X]g' U] Y fYdcf]h X h Y Ugg' V]h]cb' cZ \ \ \ ' 6D' UbX g' Y U Ubh.fcdca Yf]W]bX]Wfcg' < ck y Yz]h]g' g' Wb]f]c] Yf]g' U' k \ Y h Yf' U' g' i h Yf' Yb]f' U' X]d' cgl] m' c' f' Y U] Y Vc' Xnz]h]f]U' U' X]d' cgl] m']g' U V]h]f' d' fYX] W'f' Zcf' \ m' f]h]b]g' c' &S' Q' A c' gi gi X]g' Uf] g' ddcf]b] Wb]f]U' U' X]d' cgl] m']g' h Y] c' X' d' fYX] W'f' Zcf' \ \ \ ' 6D' & S' Q' B 7' UbX k U]g]h] W'f' a Zf]b]W'f' 7 E Ug' Ua Uf' Yf' cZ Wb]f]U' U' X]d' cgl] m' U' d' Yf]X' h' \ U] Y h Y U W]f]U' W'f' cZ X]g]M]a]b]U]b] W]XFYb k]h' \ \ \ ' 6D']b' 5a Yf]W O' Z' Q' A c' f' Yz W'a dUfYXk]h' k U]g]h] W'f' a Zf]b]W'ZB 7' g'a g' h' Y U]b']XU' a Y]g' Yf' Ug']h' Xc' Yg' bch WUb] Y X' f]b] ' h Y X]m] & Q' H Y dfYgbh gi Xnz U' fY Y k]h' h Y dfy Jci g' gi X]g' Ug' B7' X]g]Ma]bUHX W]XFYb k]h' \ \ \ ' 6D' UbX U' g' U X]X]h' Uih A I 57' Wb' Ug' W' i g' X]c']X]h]Z]M]XFYb k]h' \ \ \ ' 6D'

: cf' h Y Ugg' V]h]cb' cZ Ubh.fcdca Yf]W]g' UbX 6Dz BU]i ' Yh U' O' Q Zi bXUdc]g]h] Y Ugg' V]h]cb' Vfk Yb 6D' UbX B 7']b' 5a Yf]Wb W]XFYb U]YX*!% 'mUfg' B7' g' ck YX' Ub]bX]d' Yb X]b]h] Ugg' V]h]cb' k]h' j U]f]ci g Wf]Xca YUc']Wf]g' ' a Uf' Yg']bW' X]b] ' 6D' & Q' UbX \ X' g' fcb] Wff]YU]cb' k]h' 6A = & Q' A U]]Vc'] ' Yh U' O' Q' Ydcf]h X h Uih A I 57']g' g' fcb] m' Ugg' V]h]X' k]h' Vch' G6D' UbX 86D']b' U' c' Yg' Wb]g' U] YX' %&%' m' Ufg' Zca' H' f' Yh' 6Ugg' f' c' Y' h U' O' Q' g' f' d' c' f' h X' h' Uih A I 5I 7' \ U' U' g] b]Z]Wb]h' fYU]cbg]d' k]h' gngc']W6D' V' h' bch X]U]c']W6D']b

Study Limitations

-b' ci f' gi Xnk Y X]X bch Wb]g' Xf' h Y g' V]c' Wbca]W]g]h] g' cZ Z'a]Yg' cZ h Y dUf]h] U]b]g']b' h Y UbUng]g' -bg']b' fYg]g' bW' Ug a YUc']Wb]b]X]h]cb' Wf]U]M]f]n]X' Vm]b']a dUf]YX' U]]m]cZ' d' U]g' U]bg']b' Uih bca U' Wb]Wb]f]U]cbg']c' d' fca c' h Y d' Yf]d' YU' [i W' g' Y Wf]U' bW]g' d' d' fYg] [i W' g' b' Yc'] Yb]g]]b' h Y]j Yf' U]X']b' \]V]g] Ym' c' k X]b]g]h]m]d' c' d' c' h]b' ci h' h']g' Wb]X]h]cb']c']h' Yf' k]h' U]]bW]U]g']b 6A = j Uih Yg' k c' f' g' b' h Y Yb' X' h' Y]U' d' U]a Ym' g']bX]d' Yb X]b]h' cZ a Ubi h]h]cb' cZ W]XFYb' k Yf' bch]b]g' Yg]]U]X']b' ci f' gi Xnk O' S' ! & Q : i f]h' Yfa c' f' Yz' Yb' h' ci \ \ h' Y X]U' cZ h Y gi Xnk Ug' W' W]M]X']b' m' Uf' % - - z]h]g' d' c' g] VY h Uih dfy UybW cZcj Yk Y] \h Ubx cVg]h]m] Ug]bW]U]g' XZ' Uhd' fYg]b]h]a YZi Ylc' X] Ycda Yb]g' UbX' WUb] Yg']b' Cei h' 5 Z] W]g' & Q

H Y Ubh.fcdca Yf]W]bX]6D'a YUj fY' a Yb]g' k Yf]U' Yb X]f]Ym]Z' UbX \ YbW' fYw' ' c' Y]g]a U]cb' V]U]g' k]' ' bch dfy U']b' ci f' gi Xnz -b U]X]h]cb' z' k Ya YUj fYX' 6D' X' f]b] Yf' m]W] X' c' X' X' a' cb]g' f]U]b] h Uih d' c' d' Y' a' cb]h]c' f]b] g' ci X' VY' g' U]h]X' Z' ca' W]XFYb' g' Yf' m' X]h]g' Z' ca' U j]k' d' c] b' h' c' Z' g' Yb]b] Z' f' j' i' b' Yf' UY']b' X]j']X' U' g' O' Q

Conclusion

H Y dfy UybW cZi bXfk Y] \h f]y YfZa cXfUY' UbX a]Xk Ug' \ \ \ \ Zk \ Ycj Yfk Y] \h k Ug' ck' la cb] gi 9']g Ug' fi fu' W]XFYb" B7' UbX A I 57' Wb' d' fYX] W'f' h' \ \ \ \ G6D' UbX 86D']b' Veng' k \ Y] b']f g B7' UbX A I 57' Wb' cb' m' d' fYX] W'f' \ \ \ \ G6D' < ck y Yz 6A = Wb' cb' m' d' fYX] W'f' \ \ \ \ G6D' Zcf' Veng' cb' m' H' Yf' Y k Ug' U d' c' g] h] Y g] b]Z]Wb]h Ugg' V]h]cb' Vfk Yb' 6D' UbX Ubh.fcdca Yf]W]bX]Wfcg]b' h Jg gi Xn d' c' d' U]h]cb' z' h' ci \ \ h Y Ugg' V]h]cb' cZ 86D' UbX B 7' X]g]dd]YfXU]Zf' U]i ga Yb]g Zcf' U]Y Ubx']bX]f' : i f]h' Yf' fYg' U' fW']g' fYw'a a YbX]h' c' Y] U]g' h' Y B 7' UbX A I 57' W]rcZdc]blg Zcf' c' j Yk Y] \h Z' Yg' f]W]U' m]b' ck' ! Yg' c' fW' X' g]h]b] g' U]g' h' Yg']bX]W'f' U] Yb] d' Yb]g] Ylc' i g' Y' UbX' Wb' V' i g' X]]b' U' f] Yf' d' c' d' U]h]cbg'

Acknowledgement

H Y Z]b]b]W]g' d' c' d' c' f] h' f] W]j' YX' Vm]h' Y9' cZ' ca' h' Y J I 1 b]j Yf]g]m A X]W' 7' Yb]h' Z' 5a g' M]X' a]h' Y I b]j Yf]g]m cZ' @a d' c' d' c' Z' c' i h' 5 Z] W] UbX' h' Y B' U]cb' U' F' Yg' U' W' : ci bX]h]cb' z' c' i h' 5 Z] W]]g' U' d' f' Y' W]h' X' 5' b' n' c' d] b] c' b] z' b] X]b] g' U]bX' Wb]W' g' c' b' g' c' f' Y' W'a a YbX]h]cb' Y' d' f' Yg' X]b' h]g' a U]h]U' U' Yf' h' c' g' cZ' h Y U' h' c' f' g' UbX' h' Yf' Z' c' f' h Y U' c' j' Y a Yb]h]cb' X' Z' b] X]b] g' U]bX' g' c' i fW' g' X' bch U]W]h] U]m]]U]]m]b' f' Y] U' X h' Yf' h' " K Y h' U'] f] Y' a' X]W' gi X]b]g' 5a g' M]X' a' Zcf' a Y]g' f]b] 6D']b' U' 9' c' G' W]XFYb" H Y U' h' c' f' g' Uf] Y]bX]M]X' h' h' Y 9' c' G' U' a]b]g' U' c' f' g' A' " H H A U' U' h' Z' D' H' g' Y' U' Y' X] U' b' X' f' > A U' U' X] V' c' X' i' z' Z' f' W' X]b] h' Y 9' c' G' X] U'

References

% K of X < Y h' C' f] U]b]h]cb' f]SS' E' D' f' Y' Yb]b] ' W' fcb] W]X]g' U]g' U]]h] U]]b] Y]g' a Yb]K < C'] c' V' U' f' d' c' f]h' & @b]c]A WbrU 6z @ _c_] @]U 9z A f]i n]a U] ? U]b]i i ' f' f]SS+L Bi h]h]cb]U' g]h] g' g' Vc' W' W' bca]W]g]h] g' Yf]h]U]Z' U]bX' Vcc' X' d' f' Yg] fY]b 5Z] W]b' g' Wcc' W]XFYb UbXUc' Yg' Wb]g' -b]h- 7U]X]c' %&%' %&%' %&%' + " ' K Y]g' Fz 8n]i fu' z' 6i f]h]H' Z' h' a Vcf' U]bYK J z]h]g]]Gz]h]U' f]SS' (L C' V]g]m]UbX' h' Ya YUc']V]g]h]X' ca' Y]b] W]XFYb UbXUc' Yg' Wb]g' ' 9b] ' > A' X') S' & * & & + " (" A U' h' W' c' u' i' ' A A z' < U]d' c' u' i' ' Bz' C' h' c' f' ' 5z' 7] \ Y' 6z]i g' U' b' U' < 6z' Y' h' U' f]SS' & L' K U]g]h] W'f' a Zf]b]W' UbX' a]X]i d' d' Y' U' a' W'f' a Zf]b]W']b

Yj Ui Ujcb'cZcVgHjlb WjXfYb UjXVfkYb * UbX% nUfg">7]bFYg