

### ; Yf]W\h'j YfV]YhYh'B8F X]Y 6Y\Ui dhi b[ ØVYf [Y\Y]a Y 5i gVØf[Yfi b[gd\AbY

 $\label{eq:continuous} J\,YfZUggi\,\,b[\,gfYWX\,hYffJ\,cg[\,YfUi\,\,\,Yfn]Y\,h'\,f\,\,f]gh]gWX\,Yb\,\,G]Y[\,\,[\,Y[\,Yb\,\,^1B\,8\,F\,.\,^76Yf]WX\,hYfghUhhi\,\,b[\,\,^7\emptyset V\,Yf\,^75i\,\,gV\,\emptyset f[\,Yfi\,\,b[\,\,^7U\,^3g\,^3h]\,\,gh]\,\,gh]$ 

#### 6YXYi hi b[ XYf A UggYba cV]`]g]Yfi b[

8]Y'6Yf]W\hYfghUhhi b['ØVYf'XUg'i a ghf]hhYbY' DchgXUa Yf; Y\Y]a hfYZYb '\UhhY']b'8Yi hgW\`UbX'ZØf'\YZh][Y'FYU\_h]cbYb [Ygcf[h"BUW\'XYb'i fgdfØb[`]W\Yb'J YfÒZZYbh`]W\i b[Yb'j Yf`cf'X]Y 5Z8'g][b]Z]\_Ubh'Ub'I bhYfghØhni b[ž'k Ug'Ui Z'X]Y'[YgY``gW\UZh`]W\Y A cV]`]g]Yfi b['\]bk Y]ghž'X]Y'Xi fW\'X]Y'6Yf]W\hY'Ui g[Y`Ògh'k i fXY" A UggYbXYa cbghfUh]cbYb']b'a Y\fYfYb'GhÀXhYb'j YfXYi h`]W\hYb XUg'VYgcf[hY'\bhYfYggY'i bX'XYb'K]XYfghUbX'XYf'2 ZZYbh`]W\\_Y]h [Y[Yb'X]Y'Ui Z\_ca a YbXYb'8]g\_i fgY"'Ghi X]Yb'nY][Ybž'XUgg A YX]Yb'Y]bY'YbhgW\Y]XYbXY'Fc``Y'XUVY]'gd]Y`Yb'\_ObbYbž'k]Y dc`]h]gW\Y'DUfhY]Yb'k U\f[Ybca a Yb'k YfXYb'i bX'k Y`W\Y'H\Ya Yb]b'XYb': c\_i g'XYf'; YgY``gW\UZh'fØ\\_Yb"

if]gh]gWXY'5i gY]bUbXYfgYhni b['i bX']\fY

#### ?cbgYei YbnYb

5a %' "'\* `]'&\$&( 'Yf`]Y» 'XUg' < UbgYUh]gWXY'C VYf`UbXYg[ Yf]WXh'Y]bY VYXYi hYbXY'9bhgWXY]Xi b[ ž'X]Y'XYa 'B8F'i bhYfgU[ hYž'ni VY\Ui dhYbž'Ui Z'XYa 'VYgU[ hYb'HfYZZYb'gY]Yb'D`ÀbY'ni f 5i gVØf[ Yfi b[ 'XYi hgWXYf'GhUUhgUb[ Y\Of][ Yf'X]g\_i h]Yfh'k cfXYb" 8]YgY'fYWXh`]WXYb'5i gY]bUbXYfgYhni b[ Yb'j YfXYi h`]WXYbž'k ]Y k]WXh][ 'Yg']ghž'nk ]gWXYb': U\_h'i bX'AY]bi b[ 'ni 'i bhYfgWXY]XYb"'8Ug; Yf]WXh'YbhY'O`»hYž'XUgg'X]Y'6Y\Ui dhi b[ 'ØVYf'X]Y'5i gVØf[ Yfi b[ dfcnYggi U`i bk U\f'gY]'i bX'XUa ]h'XYb'K Y[ 'ZØf'Y]bY'\_f]h]gWXY 5i gY]bUbXYfgYhni b[ 'a ]h'AYX]Yb]b\U`hYb'YVbYhY"

#### $HY]^bY\a YfibX]\fYG]Whk Y]gY$

HY]`bY\a Yf'XYg'HfYZZYbgž'XUfi bhYf'Ui W. 'Jcg[YfUi 'gY`Vghž k]XYfgdfYW.Yb'j Y\Ya Ybh'XYb'6Y\Ui dhi b[Yb'ØVYf'X]Y'5[YbXU XYf'JYfUbghU`hi b["'8Yf'j cb' 7cffYWh]j 'YfghY``hY'6Yf]W.hž'XYf'U`g; fi bX`U[Y'ZØf'X]Y'6Yf]W.hYfghUhhi b['XYf' HU[YggW.Ui 'X]YbhYž k]fX'Ui g'G]W.h'XYf'VYhfcZZYbYb'DYfgcbYb'U`g'a ]ggj YfghÀbX`]W.i bX'Y]bgY]h]['k U\f[Ybca a Yb"'8]Y'Ubk YgYbXYb'DYfgcbYb Uf[i a Ybh]YfYbž'XUgg'k]W.h][Y'8]g\_i gg]cbYb'i bX'XYfYb'\dangle \U`hY j YfnYffh'XUf[YghY``h'k i fXYbž'k Ug'XYb'9]bXfi W\_'Yfk YW\_hYž'XUgg YI hfYa Y'A U» bU\a Yb'k]Y'X]Y'5i gVØf[Yfi b['Yfbgh\UZh VYgdfcW.Yb'k i fXYb"

# FYWXh`]WXY'FU\a YbVYX]b[i b[Yb'XYf6Yf]WXhYfghUhhi b[

6YfY]hg'j cf'XYa 'CVYf`UbXYg[Yf]W\h'[]b['Jcg[YfUi''[Y[Yb 7cffYWh]j 'i bX'UbXYfY'A YX]Yb'j cfži a 'g]W\'[Y[Yb'X]Y'Ub[YV`]W\
ZU`gW\Yb'8UfghY``i b[Yb'ni 'k Y\fYb"'8Yf'5bgdfi W\ž'XUgg'X]Y
6Yf]W\hYfghUhhi b['X]Y'dYfgÒb`]W\Y'\DhY[f]h\h'XYf'VYhfcZZYbYb
DYfgcbYb'j Yf`Yhnhž'k i fXY'Xi fW\'Y]XYgghUhh`]W\Y'9f\_`\Afi b[Yb'j cb
UbXYfYb'HY]`bY\a Yfb'i bhYfa Ui Yfh"'8Yf'B8F'\_cbbhY'XU[Y[Yb
`YX][`]W\'Ui Z'X]Y'Ei Y``Yb'XYg' 7cffYWh]j !6Yf]W\hg'j Yfk Y]gYbž'k Ug
]\a']b'X]YgYf''\f]gh]gW\Yb'5i gY]bUbXYfgYhni b['b]W\h'\U`Z'

## $8Yf^5igV^]W_ibX^X]Y^< YfUigZcfXYfib[YbXYf^AYX]YbUVkY\f$

 $C\ Vk\ c\ ``XUg`I\ fhY]``Y]bY`j\ cf`Ài\ Z][\ Y`?`Àfi\ b[\ `[\ YVfUWkh`\ Uhž`V`Y]Vh X]Y`: fU[\ Y`bUWk`XYf`YbX[\ \varnothing`h][\ Yb`'i\ f]gh]gWkYb`6Yk\ Yfhi\ b[\ `XYf 6Yf]WkhYfghUhhi\ b[\ `i\ a\ ghf]hhYb"`9]bY`i\ a\ ZUggYbXY`6Yk\ Y]gUi\ ZbU\a\ Y_\ObbhY`k\ Y]hYfY`5gdY_hY`Ubg`@]Wkh`Vf]b[\ Ybž`i\ bX`Yg`V`Y]Vh UVni\ k\ UfhYbž`cV`XYf`B8F`[\ Y[\ Yb`XUg`I\ fhY]``j\ cf[\ Y\Yb`k\ ]fX"`8]Y\ a\ YX]U`Y`J\ YfUbhk\ cfhi\ b[\ `i\ bX`X]Y`fYWkh`]WkYb`A\ O[\ `]Wk_Y]hYb`ni\ f\ ?`U[\ YYf\YVi\ b[\ 'k\ YfXYb`k\ Y]hYf\]b`H\Ya\ U`]bhYbg]j\ Yf`8]g_i\ gg]cbYb\ gY]bž`X]Y`k\ Y]h'ØVYf`X]YgYb`qdYn]Z]gWkYb`:\ U```\]bUi\ g[\ Y\Yb"$ 

8]Y'Ub\U`hYbXY'8YVUhhY'ØVYf'X]Y'; YghU`hi b['j cb
BUW\f]W\hYb]b\U`hYb'i bX'XYfYb'5i gk]f\_i b[Yb'Ui Z'X]Y
; YgY``gW\UZh'gd]Y[Y`h'XUg'\_ca d`Yl Y'GdUbbi b[gZY`X'k]XYfž']b'XYa
\$\pi i fbU`]ghYb'i bX'\OZZYbh`]W\Y'5\_hYi fY'cdYf]YfYb'''9]b'a i h][Yf
GW\f]hh'j cb'J cg[YfUi '\_\ObbhY'gca ]h'b]W\h'bi f'dYfg\Ob`]W\Y
?cbgYei YbnYb'bUW\'g]W\'n]Y\Ybž'gcbXYfb'Ui W\'U`g'@Yi W\hhi fa
Z\Of'ni \_\ObZh][Y'5i gY]bUbXYfgYhni b[Yb'i a 'DfYggYfYW\hY'i bX'X]Y
XUa ]h'j YfVi bXYbYb'DZ']W\hYb'X]YbYb''

B 5;

8 Y hU]`g

6 Ygi WX Yb G]Y i bg Ui Z b!U[ "XY