

# 8 ]Y`F ØW\_\_Y\ f`XYf`GW fY]Va UgW ]bY. `Nk Y] Ghi XYbhYb`]b`K ]`h]b[ Yb`j YfnUi VYfb`a ]h B cghU`[ ]Y

Nk Y]`Ghi XYbhYb`Ui`g`K ]`h]b[ Yb`YbhXYW\_Yb`] \fY`@Y]XYbgW UZh  
ZØf`GW fY]Va UgW ]bYbž`fYghUi f]YfYb`i bX`bi hnYb`g]Y`ZØf  
VYgcbXYfY`?cffYgdc bXYbn"

≠`Y]bYf`NY]hž`]b`XYf`X]Y`8][ ]hU`]g]Yfi b[ ]`b`U`Yf`A i bXY`]ghž`[ ]Vh`Yg  
]b`K ]`h]b[ Yb`Ub`XYf`GUUf`nk Y]`t b[ Y`A`ÄbbYfž`X]Y`g]W`[ ]Un`XYa  
U`hYb`<UbXk Yf`\_j YfgW f]YVYb` \UVYb. ]`U\_cV`?fUa`d`i bX`DUi`  
<U`a`Ubbg`g]bX`Y]XYbgW UZh]W`Y`GW fY]Va UgW ]bYb!  
9bh\i`g]UghYb" `≠f`N]a`a`Yfž`XUg`ni`Y]bYf`K`Yf`\_ghUhh`i`a`Z`b`\_h]cb]Yfh  
k`i`fXYž`]gh`Y]b`k`U`fYg`DUfUX]Yg`ZØf`@]YV` \UVYf`a`Y`W`Ub]gW`Yf  
NY]`Yba`UgW ]bYb" , VYf`%\$\$`j`YfgW ]YXYbY`A`cXY`Y`ghY`Yb` \]Yfž  
XUfi`bhYf`[`fc»`Y`B`Ua`Yb`k`]Y`C`]j`Yhh]ž`5X`Yf`i`bX`F`Ya`]b[`hcb" `8]Y  
VY]XYb`Ghi`XYbhYb` \UVYb`g]W`]b`X]Y`K`Y`h`XYf`GW`fY]Va`UgW ]bYb  
j`Yfh]Y`Zh`i`bX`g]bX`XUa`]h`ni`k`U`fYb`9l`dYfhYb`Ui`Z`]\`fYa` ;`YV]Yh  
[`Yk`cfXYb"

8Yf`&`!`Ä` \f][`Y`U\_cV`Yf`\_Äfh`VY[`Y]ghYfhž`XUgg`XUg` ;`YfÄ`i`gW`XYf`  
HUghYb`i`bX`XYf`?`Ub[`XYf`GW`fY]Va`UgW ]bY`gY]bY`?`fYUhh]`]hÄ`h  
UbfY[`Yb" `K`Ybb`]W`h]ddYž`YbhghY`h`Yhk`Ug` ;`fY]ZVUfYg" `8`Ug  
A`UW`Yb`]gh`Y]b[`]Un`UbXYfYf`Dfc`nYgg`U`g`Ua` `7`ca`di`hYf`ž`gU[`h`Yf"  
8]YgY` :`Ugn]bUh]cb`ZØf`U`hY`GW`fY]VhYW`b]\_Yb`VY[`Ubb`ZØf`X]Y  
VY]XYbž`U`g`g]Y`VY]`]\`fYb` ;`fc»`Y`hYfb`] \fY`YfghYb`9fZU`fi`b[`Yb`a`]h  
XYb` ;`YfÄ`hYb`gUa`a`Y`hYb" `G]Y`Yf]bbYfb`g]W`Ub`X]Y`?`Äb[`Y`i`bX`X]Y  
<`Udh]\_ž`X]Y`VY]a`]h]ddYb`YfnYi`[`h`k`YfXYb. `XUg`?`UW`Yb`XYf`  
HUghYbž`XUg`Gi`ffYb`XYf`K`U`nY`Y]b`Ui`X]h]j`Yg`9f`YVb]gž`XUg`XYb  
hYW`bc`c`[ ]gW`Yb` :`cfhgW`f]hh`XYf`Y`hnhYb`U` \fnY`b`hY`]b`XYb  
<`]bhYf[`fi`bX`XfÄb[`h"

9]bn][ Ufh][ Y`GUa a `YfghØW\_Y`i bX`F YdUfUhi f

8]Y`VY]XYb`Ghi XYbhYb`UVYb`j cf`ZØbZ`ſ\FYb`VYgW`cggYbž`\f  
<cVVm`dfcZYgg]cbY`j cfUbni hfY]VYb`"5i g`Y]bYa`i a [ YVUi hYb  
<Yi VcXYb`YfUi g`VYhfY]VYb`g]Y`bi b`]\fY`K Yf\_ghUhh`" ð  
8Yi hgW`UbX`[ ]Vh`Yg`\_Ui a`bcW`CfhYžUb`XYbYb`U`hY  
GW`fY]Va UgW`]bYb`fYdUf]Yfh`k YfXYb`\_ØbbYb`ž`gc`DUi`ž`XYf  
&(!`Å`f][ Y`7ci g]b`j cb`ſ\_cV`"8YbbcW`V`Y]Vh`X]Y`BUW`ZfU[ Y`cW`"  
6YgcbXYfg`VY]`A YbgW`Ybž`X]Y`Ya`ch]cbU`Y`6]bXi b[ Yb`Ub`X]YgY  
A UgW`]bYb`UVYbž`nU`h`g]W`X]Y`F YdUfUhi fUfVY]h`Ui g`"9]b  
Øfh]W`Yf`K ]bnYf`VY]gd]Y`gk Y]gY`\_ca a`h`fY[ Y`a`Å»][`ni`f`K`Ufhi`b[  
i`bX`bi`mh`X]Y`GW`fY]Va UgW`]bY`bcW`ZØf`gY]bY`F`YW`bi`b[ Yb`"

8UfØVYf`\]bUi g`j Yf`\_Ui ZYb`X]Y`VY]XYb`↑ b[ Yb`A`ÀbbYf`ØVYf`XUg  
ðhYfbYh`fYghUi f]YfhY`GW`fY]Va UgW`]bYbž`X]Y`g]Y`gY`Vgh`k ]YXYf  
Z`b`\_h]cbgZ`Å`\][`[ Y`a`UW`h`\UVYb`" K ]f`\UVYb`?i`bXYb`]b`[ Ubn  
8Yi hgW`UbX`i bX`gc[ Uf`]bhYfbU]cbU`ž`Yfn`Å`h`ſ\_cV`ghc`n`"8]Y  
9i dYfh]gYž`X]Y`g]Y`]b`XYb`Y`mhYb`ſ\FYb`Yfk`cfVYb`UVYbž`VYfi`h  
Ui ZY]bYa`9i dYf]a`Ybh]Yfdfc`nYgg`/k ]Y`g]Y`Uba`Yf`\_Ybž`a`i`gghYb`g]Y  
UbZUb[ g`Y]b][ Y`A`UgW`]bYb`XUVY]`nYfghØfYbž`i`a`XYfYb  
: i`b`\_h]cbgk`Y]gY`VYggYf`ni`j`YfghY`Yb`"

8Yf`7`Ufa`Y`XYf`GW`fY]Va UgW`]bY`]b`XYf  
a`cXYfbYb`K`Y`h

C V k c`\`X]Y`VY]XYb`]bhYbg]j`a`]h`U`hYb`A`UgW`]bYb`UfVY]hYbž`g]bX  
g]Y`\_Y]bY`8][ ]hU`]g]Yfi`b[ g[ Y[ bYf`"G]Y`bi`hnYb`Xi`fW`Ui`g`Ui`W  
7ca`di`hYf`ZØf`]\f`Ghi`X]i`a`" K ]f`g]bX`GW`fY]Va UgW`]bYb!  
DfU[ a`Uh`\_Yfž`\_Y]bY`8c[ a`Uh`\_Yf`ž`gc`ſ\_cV`ž`XYf`D`m]g]\_]b`5UW`Yb  
ghi`X]Yfh`" ðfY`@]YVY`ni`f`GW`fY]Va UgW`]bY`]gh`Y]b`6`]W`\_ni`fØW`\_]b  
X]Y`J`Yf[ Ub[ Yb`Y]hž`XYf`[ `Y]W`nY]h][`Ui`W`Y]b`GhØW`\_B`cgU`[ ]Y`]b  
X]Y`a`cXYfbY`K`Y`h`Vf]b[ h`"

GW`fY]Va UgW`]bYb`g]bX`d`cg]h]j`VYgYhnh`ž`gU[ h`J`Y]h`8]XW`hi`bY]h  
j`ca`A`i`gYi`a`ZØf`?`ca`a`i`b]\_Uh]cb`]b`6Yf`]b`" ð`gY]bYf`GUa`a`i`b[  
Z]bXYb`g]W`ØVYf`" \$`ſ`]g]hcf]gW`Y`A`cXY`Yž`X]Y`X]Y`9bhk`]W`\_i`b[`XYf  
GW`fY]V[ Yf`Å`hY`Xc`\_i`a`Ybh]YfYb`" <Yi`hY`k`YfXYb`j`]Y`Y

GW fY]Va UgW ]bYb` \Ui dhgAW`]W`U`g`XY`cfUh]j Y`CV`Y`\_hY  
[ YgW`Ahzh`X]Y`gW`ObY`9f]bbYfi b[ Yb` \Yfj`cffi`ZYb`" `>XYf`A`YbgW`ž  
XYf`Y]bY`GW fY]Va UgW ]bY`g]Y`h`k`]fX`gc`Zc`fh`bc`ghU`[ ]gW` ž`Yf`\_`À`fh  
8]XW`hi`bY]h`i`bX`i`bhY`fghfY]W`h`gc`X]Y`Ub` \U`hY`bXY`6YXYi`hi`b[  
X]YgYf` ; Yf`À`hY` ]b`Y]bYf`X][ ]hU`Yb`NY]h"

Gck c` \`>U`\_cV`U`g`Ui`W`DUi` `k`YfXYb`]a` `ca`a`YbXYb`GYa`YghYf  
] \fY`GW fY]Va UgW ]bYb`gc[ Uf`]bg`5i`g`UbX`a` ]hbY` \a`Yb`"DUi` `d`Ubhž  
gY]bY`C`]j`Y`h]`>W`a` ]h`bUW`>U`]Yb`ni` `bY` \a`Yb`ž`i`a` `6f]YZ`Y`Ub  
: Ua` ]`Y`i`bX` : fYi`bXY`ni` `gW`fY]VYb`" `8Ug`]gh`Z0f`a` ]W`Y]bZUW  
i`bj`Yfn]W`hVUf`"8Ug` ; YZ0` \`ž`a` ]h`XYf`GW fY]Va UgW ]bY`6f]YZ`ni  
j`YfZUggYbž`]gh`i`bYfgY`h`]W` ž`gU[ h`XYf`Ub[ Y` \YbXY`Ghi`XYbh`XYf  
K`Y]bk`]fhgW`UZn"

8]Y`VY]XYb`<`YffYb` \UVYb`b]W`h`bi`f`] \fY`@Y]XYbgW`UZn`i`f  
DfcZYgg]cb`[ Ya`UW`hž`gc`bXYfb`Ui`W`Y]bYb`\_`Y]bYb`F`Ui`a` `Z0f`X]Y  
9f]bbYfi`b[ `i`bX` ; YgW ]W`hY`[ YgW`UZZYb`" >fY`GW fY]Va UgW ]bYb  
g]bX`b]W`hY]bZUW` `bi`f`K`Yf`\_nYi`[ Y` `g]Y`g]bX`6f0W`Yb`]b`X]Y  
J`Yf[ Ub[ Yb` \Y]hž`X]Y` ; YgW ]W`hYb`Yfn`À`Yb`i`bX`X]Y`NY]h  
gh]`ni`ghY` \Yb`gW`Y]bYb`UggYbž`]ba` ]hYb`Y]bYg`g]W`fUgUb`h  
j`Yf`À`bXYfbXYb`X][ ]hU`Yb`NY]hU`hYfg"

## 9]b`9fVY`VYk`U` \fYb

8]Y` : Ugn]bUh]cb`XYf`VY]XYb`Ghi`XYbhYb`nY][ hž`XUgg`U`hY  
HYW`bc`c`[ ]Y`Ui`W`]b`XYf`a`cXYfbYb`K`Y`h] \fYb`D`Uhn` \Uh`" >XYa  
g]Y`XUg`K`]ggYb`i`bX`X]Y`<`UbXk`Yf`\_g`i`bgh`fi`bX`i`a  
GW fY]Va UgW ]bYb`VYk`U` \fYbž`hfU[ Yb`g]Y`XUni` `VY]ž`X]Y  
 ; YgW ]W`hY`i`bX`X]Y`GW`Ob` \Y]h`X]YgYf`a`YW`Ub]gW`Yb  
K`i`bXYfk`Yf`\_Y`ni` `gW`0hnYb`"Gc`W`Y]bY`@Y]XYbgW`UZn]gh`b]W`h`bi`f  
Y]b`<`cV`V`mž`gc`bXYfb`Ui`W`Y]b`k`Yfhj`c` `Yg`9fVYž`XUg`ni`\_0bZh][ Y  
 ; YbYfUh]cbYb`]bgd]f]Yfh`" >YXYa` `?`UW`\_i`bX`YXYa` `F`UhYfb`ghYW`h  
Y]b`Gh0W`\_ ; YgW ]W`hYž`XUg`b]W`h`j`Yf[ YggYb`k`YfXYb`gc` `hY"

8]Y` : Ugn]bUh]cb`Z0f`GW fY]Va UgW ]bYb`i`bX`XYfYb` ; YgW ]W`hY

GW fY]Va UgW ]bYb` \UVYb`Y]bY`Ub[ Y`i`bX`ZUgn]b]YfYbXY  
 ; YgW ]W`hYž`X]Y`Yb[ `a` ]h`XYf`9bhk`]W`\_i`b[ `XYf`a`cXYfbYb

?ca a i b]\_Uh]cb j Yf\_bØdZh]gh"8]Y YfghY dUhYbh]YfhY  
GWfY]Va UgW]bY k i fXY "%+( j cb XYa '9b[ `AbXYf< YbfmIA ]`  
Ybhk cfZYbž`U`YfX]b[ g`XUi YfhY Yg`V]g`]b`X]Y`%, \* \$Yf`š\ fYž`V]g`g]Y  
Y]bY Yfbgh\ UZhY [ YgY`gW UZh]WXY`F Y`Yj Un`Yf`Ub[ hY""8]Y  
FYa ]b[ hcb / `Gcbg`7ca dUm`VfUW hY`%, +` X]Y`YfghY  
GWfY]Va UgW]bY`Ui ZXYb`A Uf\_hž`X]Y`]b`GYf]YbdfcXi \_h]cb  
[ YZYfh][ h`k i fXY""8]YgY`9fZ]bXi b[ `fYj c`i h]cb]YfhY`X]Y`gWf]Zh]WXY  
?ca a i b]\_Uh]cbž]bXYa `g]Y`XUg`GWfY]VYb`YZZ]n]YbhYf`i bX  
ni [ `Ab[ `]WYf`a UW hY""GWf]ZhghY`Yfž`6ØfcUb[ YghY`hY`i bX`GWØ`Yf  
Yf\_UbbhYb`gWbY`X]Y`J cfhY]Y`X]YgYf`HYWbc`c[ ]Y`

⇒ @Ui ZY`XYf`NY]h[ UV`Yg`nU\`fY]WXY`⇒bcj Uh]cbYbž`XUfi bhYf`X]Y  
9]bZØ\fi b[ `XYf`Y`Y`\_hf]gWYb`GWfY]Va UgW]bY`]b`XYb`%-` \$Yf  
š\ fYb`i bX`X]Y`9bhk ]W\_`i b[ `dcfhUV`Yf`A cXY`Y`]b`XYb`%-` ) \$Yf  
š\ fYb""8]YgY` : cfhgWf]hY`hfi [ Yb`ni f`Dcdi `Uf]h`h`XYf  
GWfY]Va UgW]bY`VY]ž`X]Y`V]g`]b`X]Y`%-` , \$Yf`š\ fY`U`g  
GhUbXUfX[ Yf`h`ZØf`X]Y`HYI hj YfUfVY]hi b[ [ U`h""⇒XYb`Y`hnhYb  
š\ fnY\ bhYb`]gh`X]Y`J Yfk YbXi b[ j cb`GWfY]Va UgW]bYb`Y`XcW  
ghUf`\_ni fØW\_ [ Y[ Ub[ Ybž`XU`7ca di hYf`i bX`X][ ]hU`Y  
GWfY]Vk Yf\_nYi [ Y`X]Y`GWfY]V[ Yk c\b\Y]hYb`[ fi bX`Y[ YbX  
j Yf`h`XYfh`\UVYb""8Yb`bcW`Yf`YVYb`U`hY`GWfY]Va UgW]bYb`]b  
XYb`Y`hnhYb`š\ fYb`Y]bYb`[ Yk ]ggYb`F Yj ]j U`U`g`bcghU`[ ]gWY  
CV`Y`\_hY`i bX`GUa a `YfghØW\_Y"

GWfY]Va UgW]bYb`U`g`HY]`XYg`\_i`hi fY`Yb`9fVYg

8]Y`6YXYi hi b[ `XYf`GWfY]Va UgW]bY`[ Y`h`ØVYf`]\fY  
: i b\_h]cbU`]h`h`h`\]bUi g/g]Y`]gh`Ui W`Y]b`HY]`XYg`\_i`hi fY`Yb`9fVYg"  
⇒ A i gYi a `ZØf`?ca a i b]\_Uh]cb`]b`6Yf`]b`k ]fX`X]Y`9bhk ]W\_`i b[  
XYf`GWfY]Va UgW]bY`U`g`HY]`XYf`hYWbc`c[ ]gWYb` ; YgW]W hY  
Xc`\_i a Ybh]Yfh""8]Y`GUa a `i b[ `XYg`A i gYi a g`i a ZUggh`ØVYf` "\$  
9I Ya d`UfYž`X]Y`b]W h`bi f`X]Y`hYWb]gWYb` : cfhgWf]hY`ž`gcbXYfb  
Ui W`X]Y`gcn]U`Yb`J Yf`h`XYfi b[ Yb`k ]XYfgd]Y[ Y`bž`X]Y`a ]h`XYf  
Bi hni b[ `X]YgYf` ; Yf`h`Y`Y]b\Yf[ ]b[ Yb""J ]Y`Y`XYf`GdYbXYfž`X]Y`]\fY  
GWfY]Va UgW]bYb`ZØf`X]Y`GUa a `i b[ `UbV]YhYbž`Yfn`h`Yb  
dYfgØb`]WY` ; YgW]W hYbž`X]Y`a ]h`XYf`J Yfk YbXi b[ `X]YgYf` ; Yf`h`Y  
j YfVi bXYb`g]bXž`k Ug`XYb`Ya ch]cbU`Yb`K Yfh`X]YgYf`A UgW]bYb  
i bhYfghfY]W h"

8]YgYf'5gdY\_h'k ]fX'\Äi Z][ 'j cb'GUa a `Yfb'i bX'@]YV\UVYfb  
\Yfj cf[ Y\cVYbž'X]Y'GWfY]Va UgW]bYb'b]W'h'bi f'U'g'hYWb]gWY  
; YfÄhY'UbgY\Ybž'gcbXYfb'U'g'HfÄ[ Yf'j cb'9f]bbYfi b[ Yb'i bX  
; YgW]W'hYb"'8]Y'FØW\_\_Y\f'ni f'Bi hni b[ 'j cb'GWfY]Va UgW]bYb  
\_ÖbbhY'Ui W'U'g'; Y[ YbVYk Y[ i b[ 'ni f'X][ ]hU'Yb'K Y'h']bhYfdFYh]Yfh  
k YfXYbž]b'XYf'XYf'gWbY''Yž'cZiZØW'h][ Y'5i ghUi gW'j cb  
≠Zcfa Uh]cbYb'X]Y'h]YZfYž'dYfgÖb`]WY'?ca a i b]\_Uh]cb`]b'XYb  
<]bhYf[ fi bX'XfÄb[ h"

5\_hi Y''Y'HfYbXg'i bX'GhUh]gh]\_Yb

9]bY'I a ZfU[ Y'XYg'GhUh]gh]gWYb'6i bXYgUa hYg'\Uh'Yf[ YVYbž'XUgg  
\_bUdd'+\$'i 'XYf'6i bXYgVØf[ Yf'\_Ui a 'cXYf'[ Uf'b]W'h'a Y\fa ]h  
GWfY]Va UgW]bYb'gWfY]VYb"'8YbbcW'bY\ a Yb']a a Yf'a Y\ f  
A YbgWYb'≠hYfYggY'Ub'XYa 'GWfY]VYb'Ui Z'U'hYb'A UgW]bYb'Ui Z'  
≠gVYgcbXYfY'† b[ Y'A YbgWYb']b'ghÄXh]gWYb'; YV]YhYb'gi WYb  
bUW'K Y[ Ybž'g]W'j cb'XYf'X][ ]hU'Yb'?ca a i b]\_Uh]cb'UVni [ fYbnYb  
i bX'X]Y'UbU'c[ Y'9fZU\fi b[ 'XYg'GWfY]VYbg'bUW'ni j c''n]Y\Yb"  
Cb`]bY!D'UhZcfa Yb'i bX'gc'n]U'Y'A YX]Yb'ZØfXYfb'X]YgY'≠hYfYggYbž  
]bXYa'g]Y'; Ya Y]bgWUZhYb'i bX'8]g\_i gg]cbgZcFYb'gWUZZYbž]b  
XYbYb'g]W'GWfY]Va UgW]bYb!9bh\i g]UghYb'Ui ghUi gWYb  
\_ÖbbYb"

≠'XYb''YhnhYb'≠\fYb'\Uh'Y]b'5bgh]Y[ 'XYf'J Yf\_Äi ZY'j cb'J]bhU[ Y!  
GWfY]Va UgW]bYb'ØVYf'Cb`]bY!A Uf\_hd`ÄhY'k ]Y'Y6Um'i bX'9hgm  
ghUh[ YZi bXYb"'J]Y'Y'X]YgYf'J Yf\_Äi ZY'g]bX'Ub'@]YV\UVYf'cXYf  
GUa a `Yf'[ Yf]W'hYhž'UVYf'Ui W'Ub'A YbgWYbž'X]Y'XUg  
bcghU`[ ]gWY'; YZØ\''XYf'<UbXk Yf\_g\_i bgh'gW'ÄhYb"'9g'YbhghY\Yb  
ni bY\ a YbX'FYdUfUhi fk Yf\_ghÄhYbž'i bX'Y]b][ Y'† b[ Y  
I bhYfbY\ a Yf'VYn]Y\Yb'5'h[ YfÄhYž'i a'g]Y'YbhgdFYWYbX  
fYghUi f]Yfhi bX'Zi b\_h]cbghØW'h][ 'k ]YXYf'ni 'j Yf\_Ui ZYb"'8]YgY  
9bhk ]W\_i b[ 'nY][ hž'XUgg'hfchn'XYf'j cf\YffgWYbXYb'X][ ]hU'Yb  
HYW'bc`c [ ]Yb'Y]b'ZcfhXUi YfbXYg'≠hYfYggY'Ub'X]YgYb'\]ghc f]gWYb  
; YfÄhYb'VYghY'h"

6Ygi WYb'G]Y'i bg'Ui Z'b!U[ "XY