

6Yf`]b!<Ua Vi f[ . '6U\ bghfYW\_Y `k ]fX `Z0f  
`Ub [ k ]Yf][ Y `GUb]Yfi b [ ` [ YgdYffh

8]Y `6U\ bghfYW\_Y `6Yf`]b!<Ua Vi f[ `]gh`k Y [ Yb  
GUb]Yfi b [ gUfVY]hYb `V]g`%( " `8YnYa VYf` [ YgdYffh" `< ]Yf  
YfZU\ fYb `G]Y `U`Y `ϕZcg`ni `l a `Y]hi b [ Yb`i bX  
9]bgW\ fÀb\_i b [ Yb"

8]Y `VYj c fghY\ YbXYb `6Ui UfVY]hYb `Ui ZXYf`ghUf\_`ZfYe i Ybh]YfhYb  
6U\ bghfYW\_Y `nk ]gW\ Yb `6Yf`]b`i bX`<Ua Vi f[ `g]bX`b]W\ h`bi f`Y]b  
`c [ ]gh]gW\ Yg`DfcV`Ya ž`gcbXYfb`k YfZYb`Ui W\ `Y]b`@]W\ h`Ui Z`X]Y  
k Y]hfY]W\ YbXYb`<YfUi gZcfXYfi b [ Ybž`a ]h`XYbYb`X]Y `8Yi hgW\ Y  
6U\ b`\_cbZfcbh]Yfh`]gh" `A ]h`fi bX`" \$"\$\$\$` : U\ f [ ÀghYb`hÀ [ `]W\ `nY][ h  
g]W\ `X]Y `6YXYi hi b [ `X]YgYf`J YfV]bXi b [ `Z0f`DYbX`Yf`i bX`F Y]gYbXY"  
8]Y `bchk YbX][ Yb`GUb]Yfi b [ Yb`0VYf`a Y\ fYfY`A cbUhY  
i bhYfghfY]W\ Yb`X]Y `Xf]b [ YbXY`Bchk YbX][ `Y]hž`X]Y  
GW\ YbYb]bZfUghfi `hi f`]b`8Yi hgW\ `UbX`ni `a cXYfb]g]YfYb`i bX`ni  
j YfVYggYfb"

6Ui UfVY]hYb`i bX`]\ fY`5i gk ]f\_i b [ Yb

5V`X]YgYa `: fY]hU [ `k ]fX`X]Y `6U\ bghfYW\_Y `Ui Z [ fi bX`Xf]b [ YbX  
YfZcfXYf`]W\ Yf`GUb]Yfi b [ gUfVY]hYb `V]g`ni a `: U\ fd`Ubk YW\ gY`Ua  
%( " `8YnYa VYf` [ YgdYffh" `ϕ`X]YgYf`NY]h`k ]fX`a Y\ f`U`g`+(  
?)`ca YhYf`; `Y]gY`YfbYi Yfh`igck ]Y`%\$\$`K Y]W\ Yb`Ui g [ YhUi gW\ h"  
8]Yg`Z0\ fh`ni `Yf\ YV`]W\ Yb`6YY]bhf`ÀW\ h][ i b [ Yb`]a `: Yfb!`i bX  
F Y [ ]cbU`j Yf`\_Y\ fž`XU`X]Y `5bnU\ `XYf`N0 [ Y`nk ]gW\ Yb`6Yf`]b`i bX  
<Ua Vi f[ `Ui Z`bi f`Y]bYb`dfc`Ghi bXY`fYXi n]Yfh`k ]fX"

9fgUhnj Yf`\_Y\ f`i bX`l a `Y]hi b [ Yb

l a `X]Y `5i gk ]f\_i b [ Yb`Z0f`F Y]gYbXY`ni `a ]`XYfbž`k YfXYb`X]Y

: YfbnØ[ Y`i a [ Y`Y]hYh"8]YgY`l a `Y]hi b[ `YfZc`[ h`k Ygh]W`ØVYf  
GhYbXU`ž`GU`nk YXY`i bX`@ØbYVi f[ ž`k Ug`X]Y`F Y]gYnY]hi a `Yhk U`()   
A ]bi hYb`j Yf`Àb[ Yfh"Ni XYa `k ]fX`Y]b`9fgUhnj Yf`Y`f`a ]h`6i ggYb   
ZØf`DYbX`Yf`nk ]gW`Yb`<Ua Vi f[ `i bX`K ]hYbVYf[ Y`Y]b[ Yf]W`hYh"   
8]Y`bYi Yb`: U`fd`ÀbY`g]bX`VYfY]hg`c b`]bY`j YfZØ[ VUf`i bX`V]YhYb   
F Y]gYbXYb`Y]bY` , VYfg]W`h`ØVYf`U`hYfbUh]j Y`J YfV]bXi b[ Yb"

## „ VYf[ Ub[ g`Øgi b[ Yb`k À`fYbX`XYf 6Ui UfVY]hYb

Ni g`Àh`]W`ni `XYb`6Ui UfVY]hYb`Ui ZXYf`GhfYW`Y`bUW`<Ua Vi f[   
[ ]Vh`Yg`Ui W`Y]bYb`k Y]hYfYb`6Ui ghY`YbVYhf]YV`nk ]gW`Yb   
<Ua Vi f[ `i bX`GW`k Yf]bž`XYf`V]g`ni a `&- "GYdhYa VYf`UbXUi Yfh"   
<]Yf`k ]fX`YVYbZU`g`Y]b`9fgUhnj Yf`Y`f`a ]h`6i ggYb`Ub[ YVchYb"   
8]YgY`k Y]hfY]W`YbXYb`A U» bU`a Yb`g]bX`HY]`Y]bYg`[ fØ» YfYb   
GUb]Yfi b[ gd`Ub gž`i a `X]Y`Ni j Yf`Àgg][ \_Y]h`XYf`6U`bj YfV]bXi b[ Yb   
]b`8Yi hgW`UbX`Ub[ Zf]gh][ `ni `j YfVYggYfb"

; YbYfU`gUb]Yfi b[ .`9]b`b`c`hk YbX][ Yf`GW`f]hh

8]Y`Ui ZYbXYb`5fVY]hYb`g]bX`bi f`Y]b`HY]`VYa Ø`Yb`g]W`i a `X]Y   
; YbYfU`gUb]Yfi b[ `XYf`XYi hgW`Yb`GW`]YbYb]bZfUghfi \_hi f"8]YgY   
i a ZUggh`X]Y`A cXYfb]g]Yfi b[ `k Y]hYfYf`ghUf`\_ZfYei Ybh]YfhYf   
GhfYW`Ybž`i a `X]Y`6Yhf]YVgg]W`Yf`Y]h`i bX`DØb`\_h]W`\_Y]h`ni   
Yf`Ø`Yb"8]Y`8Yi hgW`Y`6U`b`i bX`XYf`6i bX`UVYb`Yf`Ub`bhž`XUgg   
U`fY`Ub[ Y`5i g[ UVYbj YfnØ[ Yfi b[ Yb`ni f`U`\_hi Y`Yb   
≠ZfUghfi \_hi f`\_f]gY`[ YZØ`fh`UVYbž`k Yg`U`V`X]Y`≠j Ygh]h]cbYb`Yhnh   
Yf`YV`]W`Ui Z[ Yghc`W`\_h`k YfXYb"

## 6`]W`\_]b`X]Y`Ni \_i bZh

8i fW`X]Y`i a ZUb[ fY]W`Yb`GUb]Yfi b[ gUfVY]hYb`gc`Yb`ZY`YbXY   
≠j Ygh]h]cbYb`bUW`[ Y`c`h`k YfXYbž`i a `X]Y`DØb`\_h]W`\_Y]h`ni   
ghY][ Yfb" `a `YfghYb`<U`V`U`f`&\$&( `k UfYb`ZUgh`Y]b`8f]hY`XYf   
: YfbnØ[ Y`j Yfgd`ÀhYhž`k Ug`X]Y`8f]b[ `]W`\_Y]h`X]YgYf`A U» bU`a Yb   
ni g`Àh`]W`j YfXYi h`]W`h`J cf`U`Ya `F Y]gYbXY`a ØggYb`g]W`j cfYfgh   
Ui Z`9]bgW`f`Àb`\_i b[ Yb`Y]bghY`Ybž`XcW`X]Y`<c Z`bi b[ Yb`Ui Z`Y]bY

`Ub [ Zf]gh][ Y`J YfVYggYfi b[ `XYf`6U\bj YfV]bXi b[ Yb`g]bX`[ f0» Yf  
XYbb`Y"5V`&\$&) `k ]fX`Y]bY`k Y]hYfY`GdYffi b[ `Z0f`VYj c fghY\YbXY  
5fVY]hYb`Ub`XYf`GhfYW\_Y`nk ]gWXYb`<Ua Vi f[ `i bX`6Yf`]b`[ Yd`Ubhž  
X]Y`Ui ZY]bY`bcW`i a ZUggYbXYfY`GUb]Yfi b[ `UVn]Y`h"

8YhU]`g

6Ygi WXYb`G]Y`i bg`Ui Z.`a Y]b!VYf`]b"bYh