



# ARTS1661

hfcXi Wc fm? c fYUb '6

HYfa 'H\ fYY' ##' &\$&\$

7 ci fgY`Cj Yfj ]Yk

GhJZZ`7 cbhJWw`8 YhU]`g

7 cbj Ybcfg

B Ua Y	9a U]`	5j U]`UV]`]m	@cW]h]cb	D\cbY
; ]!<mi b`G\]b	[ "g\]b4 i bgk "YXi "Ui	6m5ddc]bħa Ybh	&\$&`A cfj Yb 6fck b	- ' , ) %+' %

GWxcc``7 cbhJWw`bZcfa Uh]cb

GWxcc``cZ<i a Ub]h]Yg`UbX:@Jb[ i U[ Yg

@cW]h]cb. `GWxcc``C Z]W]žA cfj Yb`6fck b`6i ]X]b[ ž`@Yj Y``&ž&),

CdYb]b[ `<ci fg.`A cbXUm! : f]XUmž`- Ua `!) da

D\cbY. `ž`\*%&`- ' , ) `)\*, %

: Ul. `ž`\*%&`- ' , ) ; , +\$)

9a U]: [\U`4 i bgk "YXi "Ui](#)

7 ci fgY'8YHJ`g

7 fYX]hDc]bng`\*`

Gi a a UfmicZ\hY'7 ci fgY

H\]g'Wci fgY'dfcj ]XYg ]bffcXi Wcfm'Yj Y`h ]h]cb ]b'? cfYUb`Ub[ i U[ Y`Zfca`U`Wca a i b]WU]j Y`UbX`fUg`!VUgYX UddfcUW`"H\Y`a YX]i a`cZ]bglfi W]cb ]g`9b[ `]g\`UbXz`k`YfYj Yf`Uddfcdf]UHYz? cfYUb`"H\fc i [ \`h]g'Wci fgYz mci`k`j`Wcb]bi Y`hc`XYj Y`cd`VUg]Wwca a i b]WU]j Y`g`]`g`]b'? cfYUb`h\fc i [ \`j`Uf]ci g`gdYU`\_]b[ `UbX`k`f]h]b[ UW]j ]h]Yg`z`k` \`Y`Yi dUbX]b[ `mci`f`i`bXYfg]UbX]b[ `cZ\`ck`h`Y`? cfYUb`Ub[ i U[ Y`k`cf\_g`UbX`\`ck`h`Y`? cfYUb`k`UmicZ`]Z`Wcb]fUg]k`]h`mci`f`ck`b`"H\Y`hcd]Mg`Wcj YfYX`]b`h`Y`Wci fgY`]bWi`XY`\`ck`mci`hfUj Y`hc`i`b]j Yfg]mz mci`f`ZJa ]mz`gh`Xmz`\`cVV]Yg`UbX`ZJ`ci`f]h`gdc]f]g`z`XU]mUbX`k`YY`\_YbX`UW]j ]h]Yg`z`ci`gYz`Wch]b[ `UbX`ZJ`ci`f]h`W`ci`fgz`UbX`ZY`]b[ g`UbX`Ya`ch]cbg`z`UbX`g`l`cdg`UbX`[`ccXg`Z`cf`gU`Yz`UbX`k`YU`h`Yf`UbX`W]a`UH`"K` \`YfYj Yf`Uddfcdf]UHYz`h`Y`Wci fgY`i`h]`gYg`?`!dcd`a`UH`f]U`g`UbX`f`W`Y`f]fYU`]U`f`i`

7 ci fgY@YUfb]b[ `Ci hWca Yg

%` 7`ca`a`i`b]WU]j`]b`?`cfYUb`i`g]b[ `k`Y`!fY`Y`UfgYX`Ub[ i U[ Y`cb`hcd]Mg`gi`W`Ug`hUj`Y`]b[ `hc`i`b]j`Yfg]mz`ZJa ]mz`YXi`WU]cbz`XU]mUbX`k`YY`\_YbX`UW]j ]h]Yg`z`UbX`]`\_Yg`UbX`X]g`]`\_Yg`&`"`F`YUX`g`l`cf]h]Y`]h]g`]b`?`cfYUb`k` \`]W`W`cb]U]b]g]a`d`Y`]bZ`fa`U]h]cb`UV`ci`h`h`Y`hcd]Mg`Wcj`YfYX`]b`h`Y`Wci`fgY`" ` " `K`f]h`g`l`cf]h]Y`]h]g`]b`?`cfYUb`i`g]b[ `k`Y`!fY`Y`UfgYX`Ub[ i U[ Y`hc`Wcb]`Ymg]a`d`Y`a`YggU[`Yg`("`9i`d`U]b`Ugd`Y`Wg`c`ZYj`Yfm`X`Um`]Z`]b`?`cfYUz`]bWi`X]b[ `?`cfYUb`b`Ua`Yg`z`YXi`WU]cb`gm`gh`Ya`z`\`ci`g]b[ `z`UbX`k`YU`h`Yf`UbX`W]a`UH`

HYUW]b[ `GhfUH[ ]Yg`

F U]h]cbU`Y`.

?`cfYUb`G`h`X]Yg`U`h`l`BGK`d`fcj ]XYg`mci`k`]h`h`Y`cdd`cf]h`b]m]h`c`XYj Y`cd`U`VU`UbW`c`Z`Wca`d`Y`h`bh?`cfYUb`Ub[ i U[ Y`g`]`g`UbX`\_`bck`YX[ Y`UbX`i`bXYfg]UbX]b[ `UV`ci`h`?`cfYU`"?`cfYUb`Ub[ i U[ Y`Wci`fgYg`UfY`cf[`Ub]gYX`]b]h`h`fY`Y`j`Y`g`.]bffcXi Wcfmz`]b]h`fa`YX]UHYz`UbX`UXj`UbW`Xz`UbX`5`F`HG`%`\*`%`Wcb]g]h]h`Y`g`h`Y`gY`WcbX`\`U`Z`c`Z`h`Y`]bffcXi Wcfm'Yj Y`?`cfYUb`"

5`F`HG`%`\*`%`]g`XYg][`bYX`hc`\`Y`d`mci`hc`VY`UV`Y`hc`hU`\_`UbX`k`f]h`]b`?`cfYUb`UV`ci`h`mci`f`d`Y`fg`cbU`]]`j`Yg`z`]b`d`Uf]h]W`Ufz`mci`f`ZJa ]mz`gh`Xmz`\`cVV]Yg`UbX`ZJ`ci`f]h`gdc]f]g`z`XU]mUbX`k`YY`\_YbX`UW]j ]h]Yg`z`UbX`mci`f`l`ci`gYz`UbX`U`gc`hc`XYj Y`cd`mci`f`gY`ZYI`dfYgg]cb]b`?`cfYUb`z`Ygd`Y`W]U`m`UV`ci`h`mci`ZY`]b[ g`z`Ya`ch]cbg`z`UbX`dfY`Z`fY`b`W`g`"

H\YgY`fUg`\_`\Uj`Y`VYY`b`gY`Y`W`YX`V`ch`Z`cf`mci`f`]a`a`YX]UHY`d`fUW]h]WU`Udd`]WU]cb`UbX`Z`cf`mci`f`YUfb]b[ `UV`ci`h`h`Y`ZY`U`h`fYg`c`Z`h`Y`?`cfYUb`Ub[ i U[ Y`Z`f`Z`h`fY`gh`Xm`H\Y`W`c]W`c`Zj`c`WU]Vi`Ufm`UbX`[`fUa`a`Uf`UfY`WU]fYz`m]Vcb]g]XYfYX`]b`h`fa`g`c`Z`h`Y`]b]h`[`f]m]c`Z`h`Y`7`ci`fgY`"H\Y`YbX`Y`ZY`W]h]g`fU`h`Yf`]`\_Y`U`gYf]Yg`c`Z`c]Yf`Umg`h`U`h`UfY`V`ch`i`b`Vcb]b]Y`W`YX`h`Ya`gY`j`Yg`UbX`WU]b`U`gc`Wca`V]bY`hc`Z`fa`U`Uf[`Yfz`a`cfY`Wca`d`Yi`UbX`]b]h`fUW]j`Y`d`U`h`Y`fb`"7`Ugg`f`cca`UW]j ]h]Yg`UfY`Z`Ua`YX`UW`W`cfX]b[ `m]h`c`hU`\_`Z`"UXj`Ub]hU[`Y`c`Z`h`Y`gY`]b]h`fUW]j`Y`UbX`W`a`i`U]h]`Y`X]a`Ybg]cb`"

HYUW]b[ `GhfUH[ ]Yg`.

5`g`k`]h`5`F`HG`%`\*`\$`z`YUW]`c`Z`h`Y`YUfb]b[ `i`b]h]g`k`]`VY`gh`X]YX`]b`Zj`Y`\`ci`f`W`W`Y`U`h`k`c`\`ci`f`Y`W]h`fYz`U`h`k`c`\`ci`f`h`hc]f]U`UbX`Ub`UXX]h]cbU`cbY!\`ci`f`h`hc]f]U`"b`h`Y`Y`W]h`fYz`YI`d`Ub`U]h]cbg`cb`UbX`d`fUW]h]W`g`Z`cf`



5ggYgga Ybh

5ggYgga YbhHUg\_g`

5ggYgga Ybh	Ug_	K Y][ \h	8i Y'8UH	Gh XYbh@YUfb]b[ Ci hWta Yg'5ggYggYX
X!HYfa`	Wg!HYfa`HYgh			











Gi Va ]gg]cb`cZ5ggYgga YbhiHUg\_g

Hi fb]h]b`Gi Va ]gg]cb

≠mci`YbWci bHYf`U`dfcV`Ya`k` \Yb`UHYa` dh]b[`hc`gi`Va`]hmc`i`f`Ugg][`ba`YbhiHfci`[`\`Hi`fb]h]b`z`d`YUgY`  
HY`Yd`cbY`9I`HYfbU`Gi`ddcfhcb`-`,`)`"``"``%cf`Ya`U]`h`Ya`cb`YI`HYfbU`HY`hgi`ddcfh4`i`bgk`"YXi`"Ui`""Gi`ddcfh`  
`lci`fg`UfY`,`.\$\$Ua`-`-%\$.\$\$da`cb`k`YY`XUmg`UbX`-`.\$\$Ua`-`).\$\$da`cb`k`YY`YbXg`f1`\*)`XUmg`U`mY`Uf2`≠mci`  
UfY`i`bUV`Y`hc`gi`Va`]hmc`i`f`Ugg][`ba`YbhiXi`Y`hc`U`Zi`h`k`]h`Hi`fb]h]b`mci`a`UmUdd`m`Zc`f`Ub`YI`HYbg]cb`z`Vi`hmc`i`  
a`i`ghfYhU]b`mci`f`h]W`Yhbi`a`VYf`Zca`9I`HYfbU`Gi`ddcfhU`cb[`k`]h`Ubmc`h`Yf`fY`Yj`UbhXcW`a`Yb]gk`hc`  
]bWi`XY`Ug`Yj`]XYbVW`hc`gi`ddcfhmc`i`f`YI`HYbg]cb`Udd`]W]h]cb`"≠mci`Ya`U]`9I`HYfbU`Gi`ddcfhmc`i`k`]"`  
Ui`hca`U]W]m`fYW]j`Y`U`h]W`Yhbi`a`VYf`z`Vi`h]Zmci`HY`Yd`cbY`mci`k`]"`bYYX`hc`gdYW]Z]W]m`Ug`\_`Zc`f`cbY`"  
Hi`fb]h]b`U`gc`dfcj`]XYg`i`dXUH`g`cb`h`Y]f`gmgh`Ya`g`hU`h`g`cb`Hk`]hYf`"

;`YbYfU`mz`UggYgga`YbhiUg\_g`a`i`ghVY`gi`Va`]hYX`Y`YWfcb]W]m]j`]U`Y]h`Yf`Hi`fb]h]b`cf`U`A`ccX`Y`  
Ugg][`ba`Ybhi`h`]bg]h]bVW]g`k` \YfY`h`g`]g`bchidcgg]V`Yz`]hk`]"`VY`ghUHYX`cb`mci`f`Wci`fgY`g`A`ccX`Y`g]h`k`]h`  
U`HYfbU]h]`Y`gi`Va`]gg]cb`XYhU]g`"

:`cf`]bZcfa`Uh]cb`cb`lck`hc`gi`Va`]hUgg][`ba`Yb]g`cb`]bY`j`]U`A`ccX`Y`.\`hdg`#gh`XYbhi`bgk`"YXi`"Ui`#ck`!  
gi`Va`]hUgg][`ba`Yb]h`a`ccX`Y`"

## 5 WUXYa ]W< cbYgmiUbX`D`U[ ]Uf]ga

D`U[ ]Uf]ga `]g`i`g]b[ `h`Y`k`c`f`X`g`c`f`]X`Y`U`g`c`Z`c`h`Y`f`g`i`U`b`X`d`f`Y`g`Y`b`h]b[ `h`Y`a` `U`g`m`c`i`f`c`k`b`" `#`W`U`b`h`U`\_`Y`a` `U`b`m`  
Z`c`f`a`g`Z`Z`c`a` `X`Y`]V`Y`f`U`h`Y` `W`X`Y`U`h]b[ `h`c` `U`W`W`Y`X`Y`b`h`U` `m`i`W`c`d`m]b[ `Z`c`a` `U`g`c`i`f`W` `k` ]h`c`i`h`U`W`\_`b`c`k` `Y`X[ `Y`a` `Y`b`h`

I`B`G`K` `[`f`c`i`d`g`d`U[ ]Uf]ga `]b`h`c` `h`Y` `Z`c` `c`k` ]b[ `W`U`h`Y`[`c`f`]Y`g.

- i bXYfghUbx'mci f'f][ \hg'UbX'fYgdcbg]V]h]Yg'Ug'U'gh XYbhUhl BGK
- VY'Uk UfY'cZd'U[ ]Uf]ga ž'Wc'dmf][ \hž' BGK 'Gh XYbh7cXY'cZ7cbXi W'Ubx'5W'W'dhUV'Y'I gY'cZ  
I BGK '⇒H'F'Ygci f'W'g'Dc`]W'h
- VY'Uk UfY'cZ'Y'ghUbxUfXg'cZVY\Uj ]ci f'YI dY'W'X'cZYj Yfmcby']b'h'Y'I BGK 'W'a a i b]m
- 'cW'W'h'gYfj ]W'g'UbX' ]bZ'fa U]cb'UVci hl BGK 'UbX'I BGK '@]VfUfm

Gca Y'cZ'Y'gY'UfY'Ug'k ]''VY'ZJa ]]Uf'hc'mci ž'c'h'Y'fg'k ]''VY'bYk "; U]b]b[ 'U'gc`]X'i bXYfghUbx]b[ 'cZU''h'Y  
fY'U'Y'X'UgdY'W'g'cZ9@-G9'k ]''\Y'd'mci 'a U\_Y'h'Y'a cgh'cZ'mci f'gh X]Yg'Uhl BGK ""

[\h'hd.##gi V'Y'W'f'i \]X'Y'g" \]V'f'U'f'm'i b'gk "Y'X'i "U'i #' \]g'Y'#J'V'c'i h' \]g'Y](#)

