



ARTS1450

hfcXi Wc fm7 \]bYgY '5 'Zcf' Bcb!6UW_[fci bX'Gh XYbhtg

HYfa 'Hk c''##'&\$&%

7ci fgY`Cj Yfj]Yk

GHJZ`7cbHJW`8YHJ]`g

7cbj Ybcfg

7ci fgY'8YHJ]`g

7fYX]hDc]bHg`*`

Gi a a UfmicZhY'7ci fgY

H\]g]g'Ub]bfcXi WcfmWci fgY]b'A cXYfb'GHUbXUFx'7\]bYgY`Ub[i U[Y'fA UbXUF]bE'Zc'f'bcbl'VUW_[fci bX gdYU_Yfg'"H\Y'Wci fgY'k]'`ghUfhk]h'VUg]WWca dcbYbHg'cZ7\]bYgY`Ub[i U[Y.'hY b[k[žUbX'WXUfUWYfg" k]`h'UW'`mci '\ck'hY'7\]bYgY`Ub[i U[Y'k cf_g'Vch'[fUa a Uh]WU`mUbX]b'gcWci'W`h'fU`WcbhY'hg'gc hUhmc]`ghUfhc'XYj'Y'cd'mci f`]b[i]gh]WUbX'Wca a i b]WU]h]Y'Wca dYh'bwWg'"H\Y'Zci f`Ub[i U[Y'g_]`g! @]ghYb]b[žGdYU_]b[žFYUX]b[žUbX'k f]h]b['!UFY]bHY[fUH'X'h'fci [\ci h'hY'Wci fgY'"5'W`h'fU`Uk UfYbYgg]g'U'gc'Vi]`h]bhc'hY'Wci fgY'"H\fc] [\`Ub[i U[Y'gh] Xminci 'k]'`XYj'Y'cd'Ub]bZcfa YX'i bXYfghUbX]b['cZ 7\]bYgY`Ub[i]gh]WVY\Uj]ci fž'gcWYfmUbX'W`h'fY"

H\]g'Wci fgY]g'U'VY[]bbYfg]'Y'Y`Ub[i U[Y'Wci fgY'"5`gh] XYbHg'k \c'\Uj'Y'\UX'gca Y'Yi dYf]YbW'k]h'hY' `Ub[i U[Y'žY]h'Y'f'Ug'U'\Yf]hU[Y`Ub[i U[Y'cf'h'fci [\d'fYj]ci g]bghfi W]cbž'a i gh]Z`]b'hY'd'UW'a Ybh ei Ygh]cbU]fY'Uj U]UV'Y'Uh'h'fdg.#AU`Ufng'i bkg"YXi "Ui #gh] XYbHg#Wci fgYg#Ub[i U[Y'd'UW'a YbHg"Mc] 'k]'` bchVY'dYfa]hY'X'hc'Ybfc`]b'U`Ub[i U[Y'Wci fgY'hUh]g'hc'YUgmZc'f'mc] "žh]g'c'WV'fgž'mc] 'k]'`VY fYei Ygh'X'hc'W'Ub[Y'`mci f'Ybfc'a Ybh"

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

%' F YWc[b]gYž'dfcbci bW'UbX'k f]h'`d]bm]b'UbX'WXUfUWYfg'Uh]bfcXi Wcfm'Yj'Y' &' I' gY'Z' `g_]`g'cZ7\]bYgY`Ub[i U[Y'f]ghYb]b[žFYUX]b[žGdYU_]b['UbX'k f]h]b[E'Uh]bfcXi Wcfm'Yj'Y' k]h]b'hc'd]Wg'fY'Uh'X'hc'Yj'YfmXUmdfUWY]W'g]h'Uh]cbg ' " žYb]h]Zm'U'VUg]WV]h]W' i bXYfghUbX]b['cZUgdYWg'cZ7\]bYgY`Ub[i]gh]WVY\Uj]ci fž'gcWYfmUbX W`h'fY"

HYUW]b['GhfUH[]Yg'

@Ub[i U[Y'g]VYghUWci]fYX'h'fci [\U'`c]gh]WUbX]bHYfUW]j'Y'Z]g\]cbž'gc'U`Zci f`Ub[i U[Y'g_]`g!]ghYb]b[žGdYU_]b[žFYUX]b[žUbX'k f]h]b['!Ug'k'Y`Ug'U'W`h'fU`Wca dcbYbhUfY]bHY[fUH'X'h'fci [\ci h'h]g Wci fgY'"H\Y'Ya d\Ug]g]g'cb'hY'f'UbgZcfa Uh]cb'cZ]b[i]gh]Wg_]`g]bhc'UW]j'Y'Wca a i b]WU]h]cb"GDYW]Z]W]bghfi W]cbg'UbX'dfUW]W'g'dYf]h]bYbh'hc'YUW'g_]`XYj'Y'cda YbhUfY'k'cj'Yb]bhc'hY'YUfb]b['UW]j]h]Ygž U]b]bYX'k]h'hY'UggYgga YbHgž'U_]b[]bhc'UW]j'bh'hUh'h]g'Wci fgY]g'Zc'f'bcbl'VUW_[fci bX'VY[]bbYfg"hc UW]j]Y'Y'hY'XYg]fYX'YZYWž'YZc'fhUbX'WUfY'Z'`d'Ubb]b['\Uj'Y'VYb'a UXY'hc'U]b'ci f'h'UW]b['ghfUH[]Ygž a Yh'cXg'UbX'ghfi W'h'fY'k]h'hY'U]a'g'UbX'YUfb]b['ci hWca Yg'cZ'hY'Wci fgY'"H\Y'YW'h'fY'gYf]Yg'Ug'Ub cj'YfU`]bfcXi W]cb'hc'Vch'`Ub[i U[Y'UbX'W`h'fU`UgdYWg'fY'Yj'Ubh'hc'YUW'WX'Ud'h'f'"H\Y'h'hc]U'g'Zc'W'g cb'hY'Y]bHY[fUH'X'`Ub[i U[Y'g_]`g'h'fci [\Uj'Uf]YfmicZYI'YfW]gYg'"5`h'Y'UggYgga YbHgž]bW]X]b['WUgg UW]j]h]Yg'UbX'[fci d]bHYfUW]j'Y'dfc'YWgž'UfY'gYh'hc'Yb[U[Y'gh] XYbHg]b'UW]j'Y'YUfb]b['UbX'YZYW]j'Y Wca a i b]WU]h]cb"5'a i 'h]a YX]U'UddfcUW'UbX'cb!]bY'UggYgga YbHg'UfY'U'gc'UXcd'h'X'hc'Wca d'Ya Ybh'hY

5ggYgga Ybh

5`hY`XYHJ]YX`]bZfa Uh]cb`UVci h`hY`UggYgga Ybfg`k`]`VY`dfcj]YX`k`Y``]b`UXj UbW`cb`hY`7ci fgY
A ccX`Y`UbX`]b`WUgg"

5ggYgga YbhHUg_g

5ggYgga YbhHUg_	K Y][\h	8i Y`8UH`	Gh XYbh@YUfb]b[Ci hW`a Yg`5ggYggYX
A]X!hYfa `HYgh	' \$i	J Uf]ci g`fgYY`UXX]h]cbU``]bZc` VY`ck Ł	%ž`&ž'
:]bU`YI Ua`	() i	J Uf]ci g`fgYY`UXX]h]cbU``]bZc` VY`ck Ł	%ž`&ž'
7cb]bi ci g`UggYgga Ybfg`	&) i	J Uf]ci g`fgYY`UXX]h]cbU``]bZc` VY`ck Ł	%ž`&

5ggYgga Ybh8YHJ]`g

5ggYgga Ybh%`A]X!hYfa `HYgh

@Yb[h. `%)` \ci fg

8YHJ]`g.

7ca dfY`Ybg]j Y`Hgh]bW`X]b[`U`gdYU_]b[`W`a dcbYbh`@Yb[h. `&`\ci fg"

Gh XYbfg`[Yh]bX]j]Xi U`a Uf_g/cfU`UbX`k`f]Hb`ZYXVUW`"

5XX]h]cbU`XYHJ]`g.

A]X`hYfa `Hghf] \$i Ł1`&\$i` `C b`]bY`k`f]Hb`Hgh`W`j Yf]b[`@Yggcbg`%` `fXcbY`]b`K`?` `) `@VW`fYŁ`Ž`%\$i
GdYU_]b[`HYghf]C`i`hg]XY`cZWUggYg`"hc`VY`gi Va`]H`X`cb!`]bY`]b`K`?` , Ł

A cfY`XYHJ]YX`]bZfa Uh]cb`k`]`VY`dfcj]YX`k`Y``]b`UXj UbW`cb`hY`7ci fgY`A`ccX`Y`UbX`]b`WUgg"

5ggYgga Ybh&.`:]bU`YI Ua

8YHJ]`g.

7ca dfY`Ybg]j Y`Hgh]bW`X]b[`U`7ca dcg]h]cb`W`a dcbYbh`@Yb[h. `&`\ci fg"

Gh XYbfg`[Yh]bX]j]Xi U`a Uf_g/ZYXVUW`dfcj]YX`i`dcb`fYei`Ygh`

5XX]h]cbU`XYHJ]`g.

:]bU`YI Ua `f() i `£1" \$i `C b`]bY`k f]Hb`H`ghz`Wcj Yf]b[`@Yggcbg`(!, `fKcbY`Xi f]b[`h`Y`l b]j Yfg]m: cfa U`
9I Ua `DYf]cX£Ž`%\$i `7ca dcg]h]cb`HYghfKcbY`]b`K ?`%\$`@YWi`fY£Ž`) i `l`ad]Taa] Wj WdU[eWe fWYW_YX
Xi f]b[`Hi`hcf]U`g£

A cfY`8YHJ]YX`]bZcfa Uh]cb`k]`VY`dfcj]XYX`k Y``]b`UXj UbW`cb`h`Y`7 ci fgY`A ccX`Y`UbX`]b`WUgg"

5ggYgga Ybh' .`7cb]bi ci g`UggYgga Ybhg

8YHJ]g.

H\]g`]bWi XYg`(`gYhg`cZcb`]bY`ei]nnYg`fUfci bX" \$`a]bi H`g`YUW£U`bX`U`B[`k[`H`ghfUfci bX`&`a]bi H`g`dYf
gh XYb££"

Gh XYbhg[Yh]bX]]Xi U`a Uf_g/cfU`UbX`k f]Hb`ZYXVUW`"

5XX]h]cbU`XYHJ]g.

7cb]bi ci g`UggYgga Ybhg`f&) i `£1`) i `l`(`cb`]bY`ei]nnYg`fci hg]XY`cZWUggYgž`h`VY`gi Va]H`X`cb!`]bY`£Ž
) i `B[`k[`H`ghfKcbY`]b`K ?`" `h`hcf]U`££"

A cfY`XYHJ]YX`]bZcfa Uh]cb`k]`VY`dfcj]XYX`k Y``]b`UXj UbW`cb`h`Y`7 ci fgY`A ccX`Y`UbX`]b`WUgg"

Hi fb]h]b`gYH]b[.`H\]g`]g`bchU`Hi fb]h]b`Ugg][ba Ybh

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

7ca di `gcfmHYl hVcc_g.

;`fWdSfW 5Z[WeWFWj fTaa] ž@Yj Y`%DUfh%fG]a d`]ZYX`7\UfUWfj Yfg]cbtž (h`9X]h]cb

;`fWdSfW 5Z[WeWl` ad]Taa] ž@Yj Y`%DUfh%fG]a d`]ZYX`7\UfUWfj Yfg]cbtž (h`9X]h]cb

VmHUc!VXi b[`MjC`UbX`M Y\i U`@] žUbX`di V]g\YX`Vm7\Yb[/ Hgi]"ž5j U]UV`Y`Zca`l BGK`'6cc_g\cd"

F YWca a YbXYX`F Ygci fWg

F YWca a YbXYX.

;`fWdSfW 5Z[WeW5ZScSUfWdI` ad]Taa] ž@Yj Y`%DUfh%fG]a d`]ZYX`7\UfUWfj Yfg]cbtž

VmHUc!VXi b[`MjC`UbX`M Y\i U`@] žUbX`di V]g\YX`Vm7\Yb[/ Hgi]"ž5j U]UV`Y`Zca

I BGK`'6cc_g\cd"

CHfYf`cdh]cbU`fYgci fWg.

#h[fUHfX`7\]bYgY`J c`i a Y`%K YV`5dd.`

\hdg.#k k k "WYb[!hgi]"Wca #/fck gY#bH[fUHfX!VX]bYgY!(h!YX]h]cb#bH[fUHfX!VX]bYgY!(Y!j c`!%WYb[hgi]!
k YV!Udd3]X1 &%&%&

H\]g`5dd`]bWi XYg`8][]U`HYl hVcc_ž5i X]cžJ]XYcg" #iWtghg`I G8` (' - - `Zcf`U`gi VgW]dh]cb`cZ*`a cbh`g"

CHfYf`fYWca a YbXYX`fYgci fWg`UbX`hcc`g`k]`VY`dfcj]XYX`cb`hY`7`ci`fgY`A`ccXY`"

7ci fgY`9j U`i Uh]cb`UbX`8Yj Y`cda Ybh

H\]g`Wci fgY`k]`VY`Zca U`mYj U`i UHfX`h`fci [\`A`m9l dYf]YbWž`Ug`k Y`Ug`]bZca U`mXi f]b[`hY`
k \c`Y`h`UW]b[`dfcWgg"5bm]ggi Yg`fU]gYX`]b`gh`XYbthgfZYXVUW`k]`VY`UXXfYggYXž`UbX`g`fUH[]Yg

Gi Va]gg]cb 'cZ5ggYgga YbhiHUg_g

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

Ʒmci 'YbWci bHYf'U'dfcV'Ya 'k \Yb'UH'Ya dh]b['hc'gi Va]hmc i f'Ugg][ba YbhiH'fci [\ 'Hi fb]h]bž'd'YUgY
HY'Yd\cbY'9I HYfbU'Gi ddcfhcb'-',) "' ' ' %cf'Ya U]'H'Ya 'cb'YI HYfbU'HY'f'gi ddcfh4 i bgk "YXi "Ui "'Gi ddcfh
\ci fg'UfY', .\$\$Ua '—%\$.\$\$da 'cb'k YY_XUmg'UbX'-. \$\$Ua '—) .\$\$da 'cb'k YY_YbXg'fI *) 'XUmg'U'm'YUfI" Ʒmci
UfY'i bUV'Y'hc'gi Va]hmc i f'Ugg][ba YbhiXi Y'hc'U'Zi 'hk]H'Hi fb]h]b'mci 'a UmUdd'm'Zcf'Ub'YI HYbg]cbž'Vi hmc i
a i ghfYHU]b'mci f'h]W_Yhbi a VYf'Z'ca '9I HYfbU'Gi ddcfhfU'cb['k]H'UbmcH'Yf'f'Yj UbhXcW a Yb'f'g'hc
]bWi XY'Ug'Yj]XYbVW'hc'gi ddcfhmc i f'YI HYbg]cb'Udd'jW]h]cb" Ʒmci 'Ya U]'9I HYfbU'Gi ddcfhmc i 'k]
Ui 'ca UH]WU'm'f'YW]j Y'U'h]W_Yhbi a VYfž'Vi h]Zmci 'HY'Yd\cbY'mci 'k]'b'Y'YX'hc'gd'Y'W]WU'm'Ug_'Zcf'cbY"
Hi fb]h]b'U'gc'dfcj]XYg'i dXUH'g'cb'H'Y]f'gm'g'Ya 'g'H'U'g'cb'Hk]H'Yf"

; YbYfU'mž'UggYgga YbhiHUg_g'a i ghVY'gi Va]H'YX'Y'Y'W'f'cb]WU'mj]U'Y]H'Yf'Hi fb]h]b'cf'U'A ccX'Y
Ugg][ba YbH' 'b]bg]H'UbVW'g'k \YfY'H'g]g'bc'h'dcgg]V'Yž'hk]'VY'g'H'YX'cb'mci f'Wci fgY'g'A ccX'Y'g]H'k]H
U'HYfbUH] Y'gi Va]gg]cb'XYHU]g"

: cf]bZ'fa UH]cb'cb'\ck 'hc'gi Va]h]Ugg][ba Yb'g'cb]bYj]U'A ccX'Y. \h'hdg.#gh XYb'hi bgk "YXi "Ui #ck!
gi Va]h]Ugg][ba Yb'ha 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']hYg'Ug'U'gh XYbhUhl BGK
-

5 WUXYa]WbZcfa Uh]cb

: cfYggYbh]U`gh XYbh]bZcfa Uh]cb fY`Uh]b[`tc.

- fYei Yghg`Zcf`YI H`bg]cb/
- `UhY`gi Va]gg]cbg`[i]XY`]bYg/
- fYj]Yk `cZa Uf_g/
- I BGK `<YU`h`UbX`GUZY`mdc`]WYg/
- YI Ua]bUh]cb`dfcW`Xi fYg/
- gdYW]U`W`bg]XYfUh]cb`]b`hY`Yj YbhicZ]`bYgg`cf`a]gUXj Ybh fY/
- gh XYbhYei]m]UbX`X]gUV`]m/
- UbX`c`hYf`YggYbh]U`UWUXYa]W]bZcfa Uh]cbz`gYY

[\ftdg.#k k k "Uftg"i bgk "YXi "Ui #W ffYbh\]gh XYbh\]UWUXYa \]W\]bZcfa Uh\]cb#dfchW`g`\[i \]XY`\]bYg#](#)

⇒ U[Y`7 fYX]h

G\i H`Yfg`hW_

7F ⇒ CG

7F ⇒ CG`Dfcj]XYf`7cXY.`\$\$\$- ;

5W_bck `YX[Ya YbhicZ7ci bhfm

K Y`UW_bck `YX[Y`hY`6YXY[U`dYcd`Y`k `c`UfY`hY`fUX]h]cbU`W`ghcX]Ubg`cZ`hY`UbXg`cb`k `]W`I BGK
? Ybg]b[`tc`b`W]a`di`g`]g`cW]hYX"