



## ARTS2690

GYa Ubh]Vg'UbX'DfU[ a Uh]Vg

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

7 ci fgY`Cj Yfj ]Yk

GhUZZ 7icbWV18YHU]`g

7 cbj Ytbffg


7ci fgY'8YHJ]`g

7fYX]hDc]bqg '\*`

Gi a a UfmcZh\Y'7ci fgY

h\]g`Wci fgY`mci `k ]`YI d`cfY`h\Y`bUhi fY`UbX`gWc`dY`cZgYa Ubh]Wg`UbX`dfU[ a Uh]Wg`UbX`h\Y]f`d`UW`k ]h ]b @]b[ i ]gh]Wg`Hcd]Wg ]b`gYa Ubh]Wg ]bW`XY. `h\Y`bUhi fY`UbX`UbU`mg]g`cZ`YI ]W`a YUb]b[ gZ`h\Y`fY`Uh]cbg\]d VY`k YYb`a YUb]b[ `UbX`Wc[ b]h]cbZ`h\Y`fY`Uh]cbg\]d`VY`k YYb`gYa Ubh]Wg`UbX`[ fUa`a UfZ`UbX`gYa Ubh]W W\Ub[ Y`Hcd]Wg ]b`dfU[ a Uh]Wg ]bW`XY. `gdYYW\`UW`h\Y`cfmZ`dc ]h]bYgg`h\Y`cfmZ`]a d`]W`hi fY`UbX dfYgi ddcg]h]cb`Mci `k ]`Uj Y`h\Y`cddcfh ]b]m]tc`Yb[ U[ Y`k ]h`UbX`UbU`mgY`[ Ybi ]bY` ]b[ i ]gh]WXUH`Mci k ]`Udd`m]h\YgY`]XYUg`bchcb`m]tc`9b[ `]g\Z`Vi h]tc`ch\Yf`Ub[ i U[ Yg`mci `\_bck`"

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

%`8 ]gh]b[ i ]g`Ua cb[ `h\Y`Wc`bW`dfg`cZgYb]h]bW`a YUb]b[ ži hY`fUbW`a YUb]b[ `UbX`gdYU`Yf`a YUb]b[ &`5dd`miUddfcdf]UH`XYgW]d]h]j Y`UbX`UbU`m]h]W`dfcW`Xi fYg`tc`h\Y`Z]Y`X`cZ]bei ]fmcZdfU[ a Uh]Wg`UbX ]h]fY`Yj Ubh]Wc`bW`d]i U`Uggi a d]h]cbg`'`5dd`miUddfcdf]UH`XYgW]d]h]j Y`UbX`UbU`m]h]W`dfcW`Xi fYg`tc`h\Y`Z]Y`X`cZ`YI ]W]ž`d`fUgU`UbX gYb]h]b]h]U`gYa Ubh]Wg`("`5bU`mgY` ]b[ i ]gh]WXUH`UbX`Uf[ i Y`h\Y`a Yf]h]g`cZ`h\Y`UbU`mg]g`"

HYUW\]b[ `GhfUH[ ]Yg`

H\]g`Wci fgY`]g`Ub`]b]h] [ fU`Wca dcbYbhcZh\Y`i bXYf[ fUXi Uh` ]b[ i ]gh]Wg`W`ff]W`i a "`h`cfXYf`tc`i bXYfg]UbX h\Y`Wc[ b]h]j Y`UbX`gcW]U`X]a Ybg]cbg`cZ`Ub[ i U[ Y`h]g`YggYb]h]U`tc` ]bj Ygh[ ]UH`h\Y`cf[ Ub]nUh]cb`cZ`h\Y`gYa Ubh]Wgm]h]a ž`UbX`h\Y`bUhi fY`cZ`h\Y`df]bW]d`Yg`cZdfU[ a Uh]Wg`"

9UW`k`YY`\_`h\YfY`k ]`VY`U`tk`c!\`ci`f`Y`W`h`fY`f`kYg][`bYX`tc`Y`UV`cfUH`cb`UbX`WUf]Zm]bZ`c`fa`Uh]cb` ]b`h\Y`Vcc`\_`g`fY`Wca`a`YbXYX`ž`d`i`g`U`cbY!\`ci`f`h`tc`f]U`"Hi`tc`f]U`g`k ]`VY`a`U]b`mXYj`chYX`tc`X]gW`gg]b[ `UbX`YI`d`U]b]b[ `h\Y`Ubgk`Yfg`tc`h\Y`YI`YfW]gYg`dfcj`]XYX`"

## 5ggYgga Ybh

@YWñ fYg`k ]`VY`dfcj ]XYX`UgmbWfcbci`g`mž`h`Uh]gž`mci`k ]`VY`UV`Y`fc`]]ghYb`cb!`]bY`Uh`h`Y`gW`YXi``YX`  
`YWñ`fY`hja`Yž`UbX`fYd`Um]hZc`f`mci`fgY`Z`Uh`Ubmich`h`Yf`hja`Y"

Hi`fcf]U`g`k ]`VY`cb`]bY`UbX`]]`Yž`Gh`XYb`tg`UfY`YI`dYW`YX`fc`VY`dfYgYbh`UbX`dUfh]W]dUHy`]b`UWñj`]h]Yg`  
DfYgYbhU]h]cbg`k ]`VY`XcbY`]b`fYU`hja`Y`h`fci`[`\`h`Y`a`YX]i`a`c`Z6`UW`VcUfX`7`c`UVcfUHy"

Gh`XYb`tg`k ]`VY`dfcj ]XYX`k ]h`cb`]bY`UWñj`]h]Yg`YUW`k`YY`\_`fc`Xc`]b`h`Y]f`ck`b`hja`Y"

## 5ggYgga YbhHUg\_g`

5ggYgga YbhHUg_	K`Y][`\`h`	8i`Y`8UHy`	Gh`XYbh@YUfb]b[ Ci`hW`a`Yg`5ggYggYX`
DfYgYbhU]h]cb`	&\$i`	cb[`c]b[`]b`h`fcf]U`g`	&ž`
DfcV`Ya`GYh`	&\$i`	&(`#/#&#&\$&\$`%%`\$\$`DA`	(`
7`Ugg`HYg`tg`%`UbX`&`	*`\$i`	%)`#/#&#&\$`%%`5A`/`%&#/#&#&\$&\$` %%`\$\$`5A`	%ž&ž`

## 5ggYgga Ybh8YhU]`g`

5ggYgga Ybh%`DfYgYbhU]h]cb`

GhUfhXUHy`.&`,`#`\$`-`#&\$&\$`\$&`,`\$\$`DA`

8YhU]`g`.

C`b`W`]b`h`Y`h`Y`fa`YUW`g`h`XYbh]g`Ugg][`bYX`fc`dfYgYbhU`h`fcf]U`fYUX]b[`]UbX`Yb[`U[`Y`h`Y`c`h`Yf`g`h`XYb`tg`]b`

H\]g' ]g'h\Y'Z]bU'Ugg][ ba YbhZcf'UHfYbXUbW'idi fdcgYg'"H\]g' ]g'U'hU\_Y'\ca Y'Ugg][ ba Ybh]b'k \]W\ ]gh' XYbhg  
k ]'W'ca d'YH'U'gYhcZdfcV'Ya g'UbX#cf'YI YfW]gYg'h\UhU'ck 'h\Ya 'hc'Udd'm'h\Y'W'cbW'dhg'W'cj YfYX' ]b'h\Y  
W'ci fgY'"H\Y'h'a Y'fYei ]fYX' ]g'Uddfcl ]a UH'mi&\ci fg"

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

5ggYgga Ybh' . '7'Ugg'HYghg'%UbX'&

GhUfhXUH' . 'Bch5dd']WV'Y

8YhU]`g.

- \$'a ]bi h'g'YUWX"" \$i 'YUWX'"HYghg'W'cj Yf'W'cb'hYbhd'fYgYbhX' ]b'YW'h' fYg'UbX'h'hc'f]U'g'"'K f]hYb'UbX'cfU'  
ZYXVUW\_

5XX]h]cbU'XYhU]`g.

H\YfY'UfY'&']b!WUgg'hYghg'"H\Y'Z]fgh]g'cb'%) #/\$'Uh%%'5A 'UbX'h\Y'gYW'cbX' ]g'cb'%)&#/%'Uh%%'5A

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



K YY_*. %' C Wtc VYf!'& C Wtc VYf	C b`]bY'5Wlj Jlm	Gh XYbtrg`k UHW`Mci hi VY`j JXYcg`UbX`Wca d`YH UWlj`jHYg`cb`]bY"
K YY_+. '&*`C Wtc VYf!' \$ C Wtc VYf	@YWh fy	DUfh]W]dUbtrg`]b`GYbtrbW`A YUb]b[ GUYX`7`UdHf`*`
	Hi hcf]U`	8 ]gW gg`7`Ugg`HYgh% .
	C b`]bY'5Wlj Jlm	Gh XYbtrg`k UHW`Mci hi VY`j JXYcg`UbX`Wca d`YH UWlj`jHYg`cb`]bY"
K YY_-. '&Bcj Ya VYf!'* Bcj Ya VYf	@YWh fy	7 cbH]I hUbX`-bZYfbW GUYX`7`UdHf`+`
	Hi hcf]U`	GUYX`7`UdHf`*`
	C b`]bY'5Wlj Jlm	Gh XYbtrg`k UHW`Mci hi VY`j JXYcg`UbX`Wca d`YH UWlj`jHYg`cb`]bY"
K YY_-.-`Bcj Ya VYf! %`Bcj Ya VYf	@YWh fy	7`Ugg]W@]b[ i ]gh]WDFU[ a Uh]Wg 7`Uda Ub`7`UdHf`" `UbX`( .
	Hi hcf]U`	GUYX`7`UdHf`+`
	5ggYgga Ybh	7`Ugg`HYgh& H]a YX`hYghcb`]bY`Xi f]b[ `h`Y`YWh fy`dYf]cX
	C b`]bY'5Wlj Jlm	Gh XYbtrg`k UHW`Mci hi VY`j JXYcg`UbX`Wca d`YH UWlj`jHYg`cb`]bY"
K YY_%. %*`Bcj Ya VYf! &\$`Bcj Ya VYf	@YWh fy	A cXYfb`DFU[ a Uh]Wg 7`Uda Ub`W`UdHf`) .
	Hi hcf]U`	7`Uda Ub`z`W`UdHf`" `UbX`( .
	C b`]bY'5Wlj Jlm	Gh XYbtrg`k UHW`Mci hi VY`j JXYcg`UbX`Wca d`YH UWlj`jHYg`cb`]bY"





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'hgi 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'mYUfI" 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'Zc'f'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'Ubmc'H'Yf'fY'Yj UbhXcW a YbHg'k'hc  
]bWi XY'Ug'Yj ]XYbVW'hc'gi ddcfhmc'i f'YI HYbg]cb'Udd'j]W]h]cb" Ʒmci 'Ya U]'9I HYfbU'Gi ddcfhmc'i 'k ]`  
Ui 'ca UH]WU'm'fYW]j; Y'U'h]W\_Yhbi a VYfž'Vi h]Zmci 'HY'Yd\cbY'mci 'k ]'b'Y'X'hc'gd'Y'W]WU'm'Ug\_'Zc'f'cbY"  
Hi fb]h]b'U'gc'dfcj ]XYg'i dXUH'g'cb'H'Y]f'gmgh'Ya 'ghU'h'g'cb'Hk ]HYf"

; YbYfU'mž'UggYgga YbhiHUg\_g'a i ghVY'gi Va ]HYX'Y'Y'W'fcb]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]hd'cgg]V'Yž'hk ]'VY'gh'UH'X'cb'mci f'Wci fgY'g'A ccX'Y'g]HY'k ]H  
U'HYfbUH] Y'gi Va ]gg]cb'XYHU]g"

: cf]bZ'fa UH]cb'cb'\ck 'hc'gi Va ]hUgg][ ba YbHg'cb]bY'j ]U'A ccX'Y. \h'hdg.#gh XYbH'i bgk "YXi "Ui #ck!  
gi Va ]hUgg][ ba YbH'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'Wcdmf][ \hž' BGK 'Gh XYbh7cXY'cZ7cbXi W'Ubx'5Ww'dhUV'Y'I gY'cZ I BGK '⇒H'F Ygci fW'g'Dc`]Wm
- VY'Uk UfY'cZh'Y'ghUbxUfXg'cZVY\Uj ]ci f'YI dYW'X'cZYj Yfmcby`]b'h'Y'I BGK 'Wca a i b]m
- `cWJh'gYfj ]W'g'UbX' ]bZcfa Uh'cb'UVci hl BGK 'UbX'I BGK '@]VfUfm

Gca Y'cZh'YgY'UfYUg'k ]`VY'ZJa ]]Uf'hc'mci ž'ch'Yfg'k ]`VY'byk " "; U]b]b[ 'U'gc`X'i bXYfghUbx]b[ 'cZU`h'Y fY'UH'X'UgdYW'g'cZ9@G9'k ]`Y'd'mci 'a U\_Y'h'Y'a cghcZmci f'gh X]Yg'Uhl BGK ""

[\hhd.##ji V'YW'i \]XYg" \]VfUfm'i bgk "YXi "Ui #' \]gY#JVci h' \]gY](#)

