



# ARTS3095

65 'A YX]U' ðhY fbg\]d

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

GWXcc``cZHA Y'5 fmg'UbX'A YX]U'`# 'I BGK ``5 fmg'UbX'GcW]U``GWYbWg

7 ci fgY'Cj Yfj JYk

'GHUZZ'7 cbhUWw'8YHU]'g'

'7cbj Ybcfg'

|             |                            |                |  |       |
|-------------|----------------------------|----------------|--|-------|
| B Ua Y      | 9a U]'                     | 5j U]'UV]'m    | @cWUhc b                               | D\cbY |
| 9a a U'>UbY | Ya a U"UbY4 i bgk "YXi "Ui | 6mUddc]bha Ybh | %%) ž'@Yj Y''%ž<br>F cVYfh<br>K YVghYf |       |

GWXcc`'7cbhUWw'žZcfa Uh]cb

Fcca " %&ž'Yj Y"" 'F cVYfhK YVghYf'6i ]X]b[

D\cbY.'f\$&Ł-' , ) '( , ) \*

9a U]': [gUa 4 i bgk "YXi "Ui](#)

K YVg]hY: [\hfdg.#gUa "Ufmg"i bgk "YXi "Ui](#)

H\Y'GWXcc`'cZhY'5fmg'UbX'A YX]U'k ci 'X`'\_Y'hc 'F YgdYWw'`m5W\_bck 'YX[ Y'hY'HfUX]h]cbU`'7 i ghcX]Ubgž  
hY'6YXY[ U'fP Ybg]b[ hcb'WJa di gŁž; UX][ U'f7 ]mUbX'5fhi' '8Yg][ b'7 Ua di gYgŁ'UbX'hY'B [ i bbUk U`  
dYcd'Y'fBi gfhU]Ub'8YZ'bvW': cfW'5WUXYa m]b'7 UbVYffUŁ'cZhY''UbXg'k \YfY YUW'WJa di g'cZI 'BGK 'jg  
'cWUHYX"

7ci fgY'8YHJ`g

7fYX]hDc]bHg`\*`

Gi a a UfmicZ\hY'7ci fgY

Gi VYWh5fYU.`? WWS[5g'fgdWS`V FWUZ` a`aYk

H\]g`Wci fgY'dfcj ]XYg'mci `k ]h`Ub`cddcfh b]hmc`i bXYftU\_Y`k cf\_]bH[ fUHx`YUfb]b[ `UbX`[ U]b`]bXi gHfm  
YI dYf]YbW`k ]h`U`cgHcf[ Ub]gU]cb`WcgY`mfY`UHx`hc`mci f`A U`cf`]b`A YX]Uz`7i` `h`fY`UbX`HYW`bc`c[ m`Mci  
a UmU`gc`Udd`mhc`k cf`\_cb`UHfUW`a Ybhc]b`Ub`UWXYa ]WfYgYUfW`dfc`YWhcf`k cf\_]b`Ub`YX]hc]f]U`fc`Y`Zc`f`Ub  
UWXYa ]W`ci fbU`"X`YU`n`z`mci `k ]`i bXYftU\_Y`Ub`]bHfbg\]d`Uz`f`mci `Uj`Y`W`a d`Y`H`X`%)`m`U`fg`c`Z`Z`"!`h`a`Y  
gh`Xmfc`f`Yei ]`U`Y`b`h`Ub`X`W`a d`Y`H`X`U`a ]b]a`i`a`c`Z`%`I`C`7`]b`h`Y`A`U`cf`"5`h`h`Y`Y`b`X`c`Z`h`Y`]b`H`f`b`g`\]d`mci  
k ]`d`fcj ]X`Y`U`gi`a`a`U`h`j`Y`f`Y`d`c`f`h`c`Z`mci`f`Y`I`d`Y`f]Y`b`W`g`Ub`X`k`cf`\_`Y`I`U`a`d`Y`g`W`a`d`Y`H`X`X`i`f]b[ `h`Y`]b`H`f`b`g`\]d`"

H\Y`]b`H`f`b`g`\]d`f`Yei ]fYg`U`hc`U`W`a`a`]h`a`Y`b`h`c`Z`%`\$`!`%`\$`\_`ci`fg`c`Z`k`cf`\_`k`]h`U`cg`h`c`f[ Ub]gU]cb`UbX`a`Um  
bcfa`U`m`V`Y`h`U`\_`Y`b`]b`Z`f`g`h`z`g`Y`W`b`X`c`f`g`i`a`a`Y`f`g`Y`a`Y`g`h`Y`f`"b`H`f`b`g`\]d`c`d`d`c`f`h`b`]h`Y`g`U`f`Y`U`X`j`Y`f`h`g`Y`X`j`]U`h`Y  
G`W`cc`c`Z`h`Y`5`f`g`\_`Ub`X`A`Y`X`]U`b`H`f`b`g`\]d`B`Y`k`g`Y`H`Y`f`"5`h`Y`fb`U`h`j`Y`m`mci`a`Um`U`d`d`c`U`W`U`f`Y`Y`j`Ub`h  
cf[ Ub]gU]cb`hc`U`d`d`m`Z`c`f`Ub`]b`H`f`b`g`\]d`"D`f`c`f`hc`g`Y`Y`\_]b[ `Ub`]b`H`f`b`g`\]d`z`mci`g`\_`ci`X`U`H`Y`b`X`Ub`]b`H`f`b`g`\]d`  
]b`Z`c`fa`U`h`c`b`g`Y`g`g`c`b`fi`b`V`m`h`Y`G`W`cc`c`Z`h`Y`5`f`g`\_`Ub`X`A`Y`X`]U`"

Hc`VY`Y`][ ]V`Y`Z`c`f`h`]g`W`ci fgY`z`mci`a`i`gh`U`j`Y`U`a`]b]a`i`a`K`5A`c`Z`+`\$`"

7ci fgY`@YUfb]b[ `Ci hW`a Yg

%`\_`U`j`Y`[ U]b`Y`X`Y`I`d`Y`f]Y`b`W`c`Z`]b`X`i`g`h`f`m`d`f`c`W`g`g`Y`g`U`b`X`d`f`U`W`]W`g  
&`"U`d`d`m`h`Y`c`f`Y`h`W`"W`c`b`W`d`f`g`\_`Ub`X`d`f`U`W`]W`g`\_]`g`[ U]b`Y`X`]b`h`Y`d`f`c[ f`U`a`hc`f`Y`U`!`k`c`f`X`W`c`b`h`Y`I`h`g  
'`"U`j`Y`Y`b`U`b`W`X`h`Y`]f`W`d`U`W`]m`Z`c`f`]b`X`Y`d`Y`b`X`Y`b`h`Y`b[ U[ Y`a`Y`b`h`k`]h`]b`X`i`g`h`f`m`d`f`c`j`]X`Y`f`g`"

HYUW\]b[ `G`h`f`U`H`[ ]Y`g`

H\]g`Wci fgY`\Ug`bc`Zcfa`U`h`Y`U`W\]b[ `W`a`d`c`b`Y`b`h`"

## 5ggYgga Ybh

H\]g'gi VYWi]g'i b[ fUXYX'gc'U'dUgg' ]g'XYdYbXYbhcb'GUh]gZUWc'fmfGMŁ'cf'I' bgU]gZUWc'fmfI' @Ł]b'a YYh]b[ hY'Wci fgY'fYei ]fYa Ybhg''5b'GM[ fUXY'k ]''bchUZYWmci f'k Y][ \hYX'Uj YfU[ Y'a Uf\_'fK 5A Ł'Vi hU': @[ fUXY k ]''

7ci fgY'fYei ]fYa Ybhg' ]bWl XY.

|  |  |  |  |
|--|--|--|--|
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

) \$\$'k cfXg'Vi ha Uma U\_Y'i d'ia cfY'cZ\Y'Wc'a V]bYX'hcU'icZ%) \$\$!&) \$\$'k cfX''ja ]hZcf'Vch'UggYgga Ybh  
Wc'a dcbYbthg"; fUX]b[ 'k ]''VY'GUhgZUWc'fm# bgUhgZUWc'fmUbX'gca Y'gi a a Uhj] Y'ZYXVUW\_k ]''VY'dfcj ]XYX"

5XX]h]cbU'XYhU]g.

H\]g'gi VYWh]g'i b[ fUXYX'gc'U'dUgg'g'XYdYbXYbhcb'GUhgZUWc'fmfGM'c'f'l bgUhgZUWc'fmf] @]'b'a YYh]b[  
hY'Wc'i fgY'fYei ]fYa Ybthg"5b'GM[ fUXY'k ]''bchUZYWh'nci f'k Y][ \hYX'Uj YfU[ Y'a Uf\_'fK 5A k'Vi hU': @[ fUXY  
k ]''

7ci fgY'fYei ]fYa Ybthg']bWl XY.

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

H\YfY`UfY`bc`dfYgWf]VYX`fYgci fWg`Zcf`h\]g`Wci fgY"

F YWca a YbXYX`F Ygci fWg

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

K Y`fYgdcX`hc`ZYXVUW`fYWf]j YX`j ]U`X]fYWhYa U]`hc`h\Y`7ci fgY`7cbj Ybcf`UbX`h\Y`K`@| b]z`UbX`  
]bZcf`a Uh]cb`dfcj ]XYX`]b`h\Y`ghi XYbhUbX`\cghZYXVUW`Zcf`a`g"

K Y`\cdY`mci`Yb`emci`f`]bhYfbg\]d`

Gi Va ]gg]cb`cZ5ggYgga YbhHUg\_g

Gi Va ]gg]cb`cZ5ggYgga YbhHUg\_g

Hi fb]hb`Gi Va ]gg]cb

Ʒmci`YbWci`bhYf`U`dfcV`Ya`k`Yb`U`H`Ya`dh]b[`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybh`h`fci`[`\`Hi`fb]hb`z`d`YUgY`  
H`Y`d`l`cb`Y`9I`H`fb`U`Gi`ddcfh`cb`-`,`)`'`'`'`%`cf`Ya`U]`h`Ya`cb`YI`H`fb`U`H`h`gi`ddcfh`4`i`bgk`"YXi`"Ui`"Gi`ddcfh`  
`l`ci`fg`UfY`,`.\$\$Ua`-`-%\$.\$\$da`cb`k`YY`XUmg`UbX`-`.\$\$Ua`-`i`.\$\$da`cb`k`YY`YbXg`f`l`\*)`XUmg`U`m`Y`Uf`l`"Ʒmci`  
UfY`i`bUV`Y`hc`gi`Va`]hmc`i`f`Ugg][`ba`Ybh`Xi`Y`hc`U`Z`U`h`k`]h`Hi`fb]hb`mc`i`a`Um`Udd`m`Z`f`Ub`YI`H`bg]cb`z`Vi`hmc`i`  
a`i`gh`f`Y`h]b`mc`i`f`h]W`Y`h`bi`a`VYf`Z`ca`9I`H`fb`U`Gi`ddcfh`f`U`cb[`k`]h`Ub`mc`h`Y`f`f`Y`j`Ub`h`X`c`W`a`Y`b`h`g`l`hc`  
]b`W`i`X`Y`U`g`Y`j`]X`Y`b`W`hc`gi`ddcfh`mc`i`f`YI`H`bg]cb`Udd`]W`h]cb"Ʒmci`Ya`U]`9I`H`fb`U`Gi`ddcfh`mc`i`k`]`  
Ui`hc`a`U`h]W`m`f`Y`W`]j`Y`U`h]W`Y`h`bi`a`VYf`z`Vi`h]Z`mci`H`Y`d`l`cb`Y`mc`i`k`]`b`Y`Y`X`hc`gd`Y`W`]W`m`U`g`\_`Z`f`cb`Y`  
Hi`fb]hb`U`gc`d`fc`j`]X`Y`g`i`d`X`U`H`g`i`cb`h`Y`j`f`g`m`g`h`Ya`g`h`U`h`g`i`cb`H`k`]h`Y`f`"

;`Yb`Y`f`U`m`z`Ugg`Y`gga`Y`bh`h`U`g`\_`g`a`i`gh`V`Y`gi`Va`]h`Y`X`Y`Y`W`f`cb]W`m`j`]U`Y`]h`Y`f`Hi`fb]hb`cf`U`A`cc`X`Y`  
Ugg][`ba`Y`bh`h`b`]b`g`h`U`b`W`g`k`Y`f`Y`h`l`g`]g`b`ch`id`c`g`g]V`Y`z`]h`k`]`V`Y`g`h`U`H`X`i`cb`mc`i`f`W`ci`fg`Y`g`A`cc`X`Y`g`]h`k`]h`  
U`h`f`b`U`h]j`Y`gi`Va`]gg]cb`X`Y`h]g`"

:`cf`]b`Z`c`fa`U`h]cb`cb`\`ck`hc`gi`Va`]h`Ugg][`ba`Y`bh`g`cb`]b`Y`j`]U`A`cc`X`Y`.\`h`td`g`#`g`h`X`Y`b`h`i`bgk`"YXi`"Ui`#`ack`!  
gi`Va`]h`Ugg][`ba`Y`bh`a`cc`X`Y`"

## 5 WUXYa ]W<c bYghmiUbX 'D`U[ ]Uf]ga

D`U[ ]Uf]ga ]g'i g]b[ 'hY`k cfXg'cf]XYUg'cZchYfg'UbX'dfYgYbh]b[ 'hYa 'Ug'mci f'ck b" `hWUb'hU\_Y'a Ubm  
Zcfa gZ'Zca 'XY`]VYfUHy`WXYU]b[ 'hc`UWV]XYbU`miW'cdm]b[ 'Zca 'U'gci fW'k ]h'ci hUW\_bck `YX[ Ya Ybh'

I BGK '[ fci dg'd`U[ ]Uf]ga ]bhc`hY`Zc`ck ]b[ `WUHY[ cf]Yg.

7cdm]b[ . 'i g]b[ 'hY`gUa Y`cf'j Yfmg]a ]Uf'k cfXg'hc`hY`cf][ ]bU`hYI hcf' ]XYU'k ]h'ci hUW\_bck `YX[ ]b[ 'hY  
gci fW'cf'i g]b[ 'ei chU]cb'a Uf\_g" `H\ ]g'U'gc`Udd`Yg'hc`ja U[ YgZ'UfhUbX`XYg][ b'dfc`YWgZ'Ug'k Y`Ug  
dfYgYbU]cbg'k \YfY`gca YcbY'dfYgYbh]g'UbchYf'g' ]XYUg'cf'k cfXg'k ]h'ci hWYX]h'

hUddfcdf]UHY`dUfUd`fUg]b[ . `7 \Ub[ ]b[ 'U`ZYk `k cfXg'UbX'd`fUgYg'k \]Y'a cghmiFYU]b]b[ 'hY`cf][ ]bU`  
g]fi W`fY`UbX`#f'dfc[ fYgg]cb'cZ]XYUg'cZ'hY`cf][ ]bU`Z'UbX`]bZcfa U]cb'k ]h'ci hUW\_bck `YX[ Ya Ybh`H\ ]g'U'gc  
Udd`Yg]b'dfYgYbU]cbg'k \YfY`gca YcbY'dUfUd`fUgYg'UbchYf'g' ]XYUg'cf'k cfXg'k ]h'ci hWYX]h]UbX`hc





