



PPEC2001

Dc`j]Wg`UbX`h\Y`A Uf_Yh

HYfa `H\fYY`##`&\$&\$



7 ci fgY`Cj Yfj]Yk

GhJZZ`7 cbhJW`8 YhU]`g

7cbj Ybcfg

B Ua Y	9a U]	5j U]`UV]`]m	@cW]hcb	D\cbY
>Ygg]WJ`K \mY	>"K \mY4 i bgk "YXi "Ui	VmUddc]bħa Ybh	Uj U]`UV`Y j]U Ya U]	

GWx`cc``7 cbhJW`h`bZcfa Uh]cb

GWx`cc``cZ<i a Ub]hYg`UbX`@Jb[i U[Yg

@cW]hcb. `GWx`cc``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]bHg '*

Gi a a UfmicZħY'7 ci fgY

H\Y'Wēi fgY'k]'YI Ua]bY'\ck 'dc'j]WU'd\]cgcd\Yfg'\Uj Y'ħci [\hUVci hħY'a YUb]b['cZfYXca žYei U]m
UbX'↑ gh]W']b'a Uf_YhgcW]Yh]Yg" "ħ]g'Wēi fgY'žmci 'k]'gh Xmdfca]bYbhfYdfYgYbhU]j Yg'cZħ c'cZħY'a cgh
]a dcfUUbhfUX]hcbg']b'dc'j]WU'd\]cgcd\m']VYfU']ga 'UbX'fYdi V']WU]b]ga " 'H\Y'Wēi fgY'k]']bhfXi W' mci 'ħ
ħY'fYdi V']WU]b W']h]W]ga g'cZWēa a YfW' Ug' Wēffi d]h]b['cZj]fhi Y' UbX'YI Ua]bY'fYdi V']WU]b XYVUH]g'UVci h
k \YħYfYWēbca]Wdck Yf' [] Yg'f]gY'ħ' Xca]bU]hcb" "ħk]' WēbhfUghħYgY'k]ħ']VYfU'UF[i a YbHg'ħUħ
a Uf_Yhg'Yb\UbW']bX]]Xi U'fYXca " 'Mci 'k]'YUfb'UVci hd\]cgcd\]WU' i bXYfghUbX]b[g'cZħY'fY'U]hcb'cZ
dc'j]WU'ħ' YWēbca]W]]b'ħY'k cf_'cZfYW'bh']VYfU'UbX'fYdi V']WU]b'd\]cgcd\Yfg'UbX'dc'j]WU'ħ' Ycf]ghg"
:] [i fYg'ħUħħY'Wēi fgY'a Um]Wēj Yf']bW' XY < UbbU\ '5fYbXħž: f]YXf]W' < UmY_ž7 \UfYg'A]'gž > Uk U\UfU'
BY\fi ž'D\]]d'DYh]ž >"; "5" 'DcWēW_ž > c\ b' F Uk 'gž > i X]ħ' G\ _Ufž5a UfmU'GYb'UbX'G]a cbY'K Y]" 'Mci 'k]'
U'gc'YUfb'ħ' i bXYfghUbX'UbX'X]gh]b[i]g\ ']VYfU'UbX'fYdi V']WU]b'UF[i a YbHg'UVci hWēbħY'a dcfUfmdc'j]WU'
UbX'dc'j]WU]ggj Ygžk \]W' a Um]bW' XY'YWēbca]W]bYei U']mž'Wē' fdcfUħ' dck Yfž'fUW]U'↑ gh]W'ž'a cXYfb
g'Uj Yfmž'UbX'UVci fYI d'c]U]hcb"

7 ci fgY'@YUfb]b['Ci hWēa Yg

%' 7 f]h]WU'mX]gW gg'ħY'df]bW]dU' WēbħY'a dcfUfmd\]cgcd\]WU'UddfcUW]Yg'ħ'ħY'Yj U'i U]hcb'cZgcW]U'ž
dc'j]WU'UbX'YWēbca]W]bgh]h h]cbgž']bW' X]b[ž'Vi hbch']a]h'Xž'ħ']VYfU']ga 'UbX'fYdi V']WU]b]ga "
&" 5dd'mi_Ym]XYUg'cZ']VYfU'UbX'fYdi V']WU]b'dc'j]WU' d\]cgcd\m'ħ' WēbħY'a dcfUfma Uf_YhgcW]Yh]Yg"
' " 7 f]h]WU'mYj U'i Uħ' _YmWēbW'dhg'cZdc'j]WU' d\]cgcd\migi W' Ug'fYXca žXYa cWUW'ž'Yei U']mž
Xca]bU]hcb'UbX'↑ gh]W'"
(" F YgYUfW' Wēa d'YI ']ggi Yg'UbX'WēbW'dhg'UbX'WYUfmidfYgYbhU]f[i a YbHg'UbX'WēbW' g]cbg']b'Vch'
cfU'UbX'k f]h]b'ž'fa "

HYUW]b['GhfUH[]Yg'

H\Y'Wēi fgY']g'ħUj [\hħfci [\ 'U'ħ c' \ci f'YW' fY'gYa]bUf'UbX'cbY'\ci f'ħ' ħcf]U' "H\Y'YW' fYg'UbX'ħ' ħcf]U'g
UfY'ghfi W' fYX'Ufci bX'k YY_'mfYUX]b[gž'ħ' ħcf]U'ħcd]W]ž'cf'X]gW gg]cb'UbX'gh' XYbhdFyGybhU]hcbg'"K YY_'m
dfYdUfU]hcb'VmifYUX]b['ħY'gYhħI ħg']g'W' W]U'ž'f'gi W'W'ggž' 'dUf]h]W]dU]hcb']b'ħY'Wēi fgY' '@YW' fYg'UfY
]bh'fUW]j Y'dfYgYbhU]hcbg'cZVUW_[fci bX'UbX'_YmWēbW'dhg']b'ħY'WēfY'fYUX]b[gž' Ž'cf'cf'cf'c[\g

GYY'A ccX'Y'Zc'f'Zi fH\Yf'XYHJ]`g

Hi fb]h]b'gYH]b[. 'H\]g'Ugg][ba Ybh]g'gi Va]mY'X'h'fci [\ 'Hi fb]h]b'UbX'ghi XYbhg'WJb'gYY'Hi fb]h]b'g)a]'Uf]m
fYdcfg"

5ggYgga Ybh' . '@cb['9ggUm

GhUfhXUH' . 'Bch5dd`]WV'Y

@Yb[h. ' ') \$\$

8YHJ]`g.

Gh XYbhg'dfYdUFY'UbX'k f]h'fYgYUfW'YggUmicZ') \$\$'k cfXg'cb'hcd]Wj'dfcj]YX'VmH'Y'7 cbj Ybcf''H\YgY
k]'fY'UH'hc'hcd]Wj'Wj YfYX'jb'k YY_g' ('hc'%"

K f]mYb'ZYXVUW'k]'VY'dfcj]YX'jb'h'Y'Zc'fa 'cZW'a a Ybhg'UbX'fi Vf]W

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

GYY'A ccX'Y

Hi fb]h]b'gYH]b[. 'H\]g'Ugg][ba Ybh]g'gi Va]mY'X'h'fci [\ 'Hi fb]h]b'UbX'ghi XYbhg'WJb'gYY'Hi fb]h]b'g)a]'Uf]m
fYdcfg"

F Ygci fWg

DfYgWf]VYX`F Ygci fWg`

D`YUgY`gYY`A ccX`Y`Zcf`hY`Wci fgY`fYUX]b[g

F YWca a YbXYX`F Ygci fWg

D`YUgY`gYY`A ccX`Y`Zcf`fYWca a YbXYX`fYgci fWg

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

Gh XYb]k]`Uj Y`hY`cddcfh b]m]c`dfcj]XY`ZYXVUW`cb`hY`Wci fgY`]bZcfa U`m]UbX`Zcfa U`m]h]ci [`hY`
A m]9I dYf]YbW`gi fj Ym`H]g`ZYXVUW`k]`VY`UbU`ngYX`Vmi`hY`Wcj Ybcf`UbX`i gYX`h]`ja`dfcj Y`hY`gh XYbh

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

- i bXYfghUjX'mci f'f][\hg'UbX'fYgdcbg]V]h]Yg'Ug'U'gh XYbhUhl BGK
- VY'Uk UfY'cZd'U[]Uf]ga ž'Wc'dmf][\hžI BGK 'Gh XYbh7cXY'cZ7cbXi W'UjX'5W'W'dhUV'Y'I gY'cZ I BGK '⇒H'F'Ygci f'W'g'Dc`]W'h
- VY'Uk UfY'cZ'Y'ghUjX'UfX'g'cZVY\Uj]ci f'YI dY'W'X'cZYj Yfmc'bY'j]b'h'Y'I BGK 'W'a a i b]m
- `cW'U'Y'gY'fj]W'g'UbX'j]bZ'c'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 bXYfghUjX]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 ""
[\hd.##ji V'Y'W' i \]X'Y'g"\]VfUfm'i bgk "YXi "Ui #' \]gY#U'Vci h' \]gY](#)

5 WUXYa]W=Zcfa Uh]cb

: cf`YggYbh]U`ghi XYbh]bZcfa Uh]cb`fY`Uh]b[`tc.

- fYei Ygth]Zc`f`Yl H`bg]cb/
- `Uh`gi Va]gg]cbg`[i]XY`]bYg/
- fYj]Yk `cZa Uf_g/