

BYiY'2 ZZbib[gnY]hYb']b'XYf A]hhY`dib_hV]V`]ch\Y_'GWX ObYVYf['UV 5i[igh

9f`YVYb`G]Y`X]Y`Yfk Y]hYfhYb`² ZZbi b[gnY]hYb`XYf
A]hhY`di b_hV]V`]ch\Y_`GW\ObYVYf[`UV`XYa`%\$"'5i[i gh
&\$&(``*XXYb`GUa ghU['j cb'%\$`V]g`%-`I\f`ghY\Yb`\bYb
i bgYfY`FÀi a`]W_Y]hYb`ni f`JYfZØ[i b["'; Yb]Y»Yb`G]Y`a Y\f
NY]h`ni a`@YgYbž`@YfbYb`i bX`JYfk Y]`Yb`]b`i bgYfYf
6]V`]ch\Y_"'6Ygi W\Yb`G]Y`i bg`]b`XYf`H\YcXcf!<Yi gg!
6]V`]ch\Y_']b`6Yf`]b`

9fk Y]hYfhY'² ZZbi b[gnY]hYb'ZØf'a Y\f Ni [Àb[`]WX_Y]h

"8]Y'6]V`]ch\Y_'k]fX'j cb'A cbhU['V]g'GUa ghU[']b'XYf'NY]h'j cb'%\$
V]g'%- 'I \f'[YÒZZbYh'gY]b"'A]h'XYf'ni gÀhn`]WXYb'² ZZbi b['Ua
GUa ghU['j cb'j]Yf'Ghi bXYb'k]``X]Y'GhUXhV]V`]ch\Y_'GWXÒbYVYf[
XYb'6Ygi WXYbXYb'a Y\f'; Y`Y[Yb\Y]h'[YVYbž']\fY'FÀi a`]WX_Y]hYb
ni 'bi hnYb"'8]Y'bYi Yb'² ZZbi b[gnY]hYb'Yfa Ò[`]WXYb'Yg'XYb
A YbgWXYb']b'XYf'I a [YVi b[ž'g]WX'a Y\f'NY]h'ZØf'XUg'@YgYbž
@YfbYb'i bX'JYfk Y]`Yb'ni 'bY\a Yb"'

8]Y bchk YbX][Y 5bdUggi b['Ub X]Y 6YXØfZb]ggY XYf; Ya Y]bXY

 $\label{eq:control_co$

9]b 'Cfh'XYf'6Y[Y[bib[

 $\label{thm:continuity:continuit$

9]bni [YVYbXY'8]YbghY'i bX Bi hni b[ga Ò[`]WX_Y]hYb

"9g']gh'U``YfX]b[g'ni 'VYUW\hYbž'XUgg'UV'%) .\$\$'I \f'gUa ghU[g
Y]b][Y'8]Ybgh`Y]ghi b[Yb'Y]b[YgW\fÀb_h'g]bX"'I bhYf'UbXYfYa
_`ObbYb'_Y]bY'BYi Uba Y`Xi b[Ybž'; YVØ\fYbnU\`i b[Ybž'5i g`Y]\Yb
i bX'FØW_[UVYb'j cb'Gd]Y`Yb'cXYf'Hcb]Yg'Xi fW\[YZØ\fh'k YfXYb"
8YbbcW\'ghY\h'XYb'6Ygi W\YfS]bbYb'V]g'%- .\$\$'I \f'X]Y
A O[`]W_Y]h'cZZYbž'A YX]Yb'ØVYf'GY`Vghj YfVi W\i b[g[YfÀhYUi gni `Y]\Yb'cXYf'ni fØW_ni [YVYb'i bX'X]Y' ₺hYfbYh!'i bX'D7!
5fVY]hgd`ÀhnY'gck]Y'X]Y'8fi W_!'i bX'?cd]Yf[YfÀhY'ni 'bi hnYb"'

: Un]h. '9]b 'GWX f]hh ']b 'X]Y 'f]WX h][Y 'F]WX hi b[

 $\begin{tabular}{ll} ``A]h`XYf`9fk Y]hYfi b[`XYf`^2 ZZbi b[gnY]hYb`[Y\h`X]Y \\ A]hhY`di b_hV]V`]ch\Y_`GW\ObYVYf[`XYb`bÀW\ghYb`GW\f]hh`]b \\ F]W\hi b[`Y]bYf`]b_`i g]j YfYb`i bX`ni [\Ab[`]W\YfYb \\ \end{tabular}$

; Ya Y]bgW\UZhgY]bf]W\hi b["'8]YgY'A U*bU\a Y'V]YhYh'b]W\h'bi f a Y\f'Bi hni b[ga Ò[`]W_Y]hYbž'gcbXYfb'ZÒfXYfh'Ui W\'XUg'gcn]U`Y A]hY]bUbXYf']b'XYf'BUW\VUfgW\UZh"8]Y'6]V`]ch\Y_'k]fX'kY]hYf\]b Y]b'k]W\h][Yf'Cfh'ZØf'6]`Xi b['i bX'6Y[Y[bi b['gY]bž'i bX'X]Y GhUXhV]V`]ch\Y_'ZfYi h'g]W\'XUfUi Zž'U``Y']bhYfYgg]YfhYb 6Øf[YfS]bbYb'\Yfn`]W\'k]`_ca a Yb'ni '\Y]*Yb"'

 $\hbox{$:$ $\emptyset f'XYhU]^*]YfhY'$$$ $\exists Zcfa$$$ Uh]cbYb'cXYf'kY]hYfY': fU[Yb'ghY\h'XUgHYUa'XYf'A]hhY`dib_hV]V`]ch\Y_'GW\ObYVYf['YXYfnY]h'nif $JYfZ\emptyset[ib["']$$$

B 5;

8 YhU]`q

6Ygi WXYb G]Y i bg Ui Z. a Y]b!VYf`]b bYh