



CRIM3022

Di V`]W<YU`h\`UbX`7cffYWf]cbg

HYfa 'C bY''##'&\$&%

7ci fgY[·]Cj Yfj]Yk

GhJZZ 7 cbhJWh 8 YhJ] g

7cbj Ybcfg

B Ua Y	9a U]`	5j U]`UV]`] m	@cWJhjcb	D\cbY
Hcbm6i hYf	<u> </u>	Uddc]bha Ybhg	GUa i Y`g 6i]`X]b['fl &) Łž @Yj Y``&	B <i>#</i> 5
>UbY`< k Ub[10bY"\k Ub[4 i bgk "YXi "Ui	Uddc]bha Ybhg	GUa i Y`g 6i]`X]b['fl &) Łž @Yj Y``&	B <i>#</i> 5

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7ci fgY 8YHJ] g

7 fYX]hDc]bhg**

Gi a a UfmcZh\Y 7ci fgY

Df]gcbYfgž'Wca a i b]mtVUgYX`cZYbXYfgž'UbX`ch\Yf`XYhJ]bYY`[fci dg`Yl Yfh\i [Yž'gcW]U`ž\YU`h\`UbX YWcbca]W]a dUWg`cb'h\Y`Wca a i b]mubX`dcgY`g][b]Z]WUbhW\U``Yb[Yg`Zcf`gcW]Ymt'H\cgY`]b`WcbhUWik]h\h\Y`^ gh]WY`gmghYa `YbXi fY`gca Y`cZh\Y`k cfgh\YU'h\`ci hWca Yg`]b`h\Y`Wca a i b]mi]b`hYfa g`cZa YbhU`

XYVUHY'k\YfY'h\Ymk]```VY'YbWci fU[YX'hc'kcf_']b'HYUa g']b'dfYdUf]b['WcbHYbhZcf'h\Y]f'XYVUH]b['hcd]Wg'j]U Ub'cb`]bY'X]gW gg]cb'VcUfX'gYHi d']b'A ccX'Y'''; fci d'XYVUHYg'k]``dfcj]XY'Ub'cddcfhi b]lm'Zcf'ghi XYbhg'hc i bXYfgHUbX'Vch\'g]XYg'cZh\Y'gca Yk\UhWcblfcj Yfg]U``bUhi fY'cZh\Y'cZYbXYf'\YU'h\'Z]Y`Xž']bWi X]b[YI d'cf]b['UgdYWg'cZ\i a Ub'f][\hg'UbX'Yh\]Wg'k]h\]b'h\Y'df]gcb'WcbHYI H'''C b`]bY'dUfh]WdUh]cb'Zcf'[fci d XYVUHYg'k]``Ugg]gh]b'YbWci fU[]b['U'[fci d'YZcfhUbX'dfcj]XY'U'd'UhZcfa 'Zcf'YUgmX]gW gg]cb'cZ]XYUg

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FYZYW]cb	&) ı	&\$#\$' #&\$&%'%%) - 'DA	%
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7`Ugg'XYVUhY'	&) ı	&%#\$(#&\$&%`\$).\$\$`DA	&ž' ž'(ž')

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8 YW] g.

Ghi XYbhhc k f]hY 'U'fYZYWh]cb'f] \$\$!%\$\$\$'k cfXgŁ'cb'h\Y]f``YUfb]b['UVci hU'hcd]WcZh\Y]f`Wc]WY 'Wcj YfYX']b K YY_'%|) 'cZh\Y'Wci fgY"'Ghi XYbhg'k]``fYZYWhcb'h\Y'YZZYWhcZh\Y]f``YUfb]b['cb'h\Ya gY'j Yg'UbX'h\Y]f'Z hi fY k cf_#dfcZYgg]cb"'Ghi XYbhg'k]``fYWY]j Y'k f]hhYb'ZYYXVUW_'UbX'U'bi a Yf]WU'[fUXY'hk c'k YY_g'Zc``ck]b[gi Va]gg]cb"'H\Y'ZYYXVUW_'g\YYh#fi Vf]Wk]``VY'Uj U]`UV'Y'hc'ghi XYbhg'gc'h\Uh'h\YmWUb'k cf_'hck UfXg gdYW]ZYX'ghUbXUfXg"

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5XX]h]cbU`XYhU]`q.

K cf`X``]a]hg`UfY`ghf]Wh'`5 bi a Yf]Wb``[fUXY`k]```VY`[]j Yb"`HYb`dYf`WhbhcZh\Y`[fUXY`k]```VY``cgh'Zcf`Yj Yfm XUmcZ`UhY`gi Va]gg]cb`i d`hc`U`a Ul]a i a `cZ) `XUmg"`5ZhYf`) `XUmgž``UhY`Ugg][ba Ybhg`k]```bch'VY`UWWdhYX" 5D5`cf`< Ufj UfX`fYZYfYbW]b[`ghm`Y`]g`hc`VY`i gYX"`

 $\label{eq:higher} \begin{tabular}{ll} High \$

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GHJfhXUhY. Bch5dd`]WUV`Y

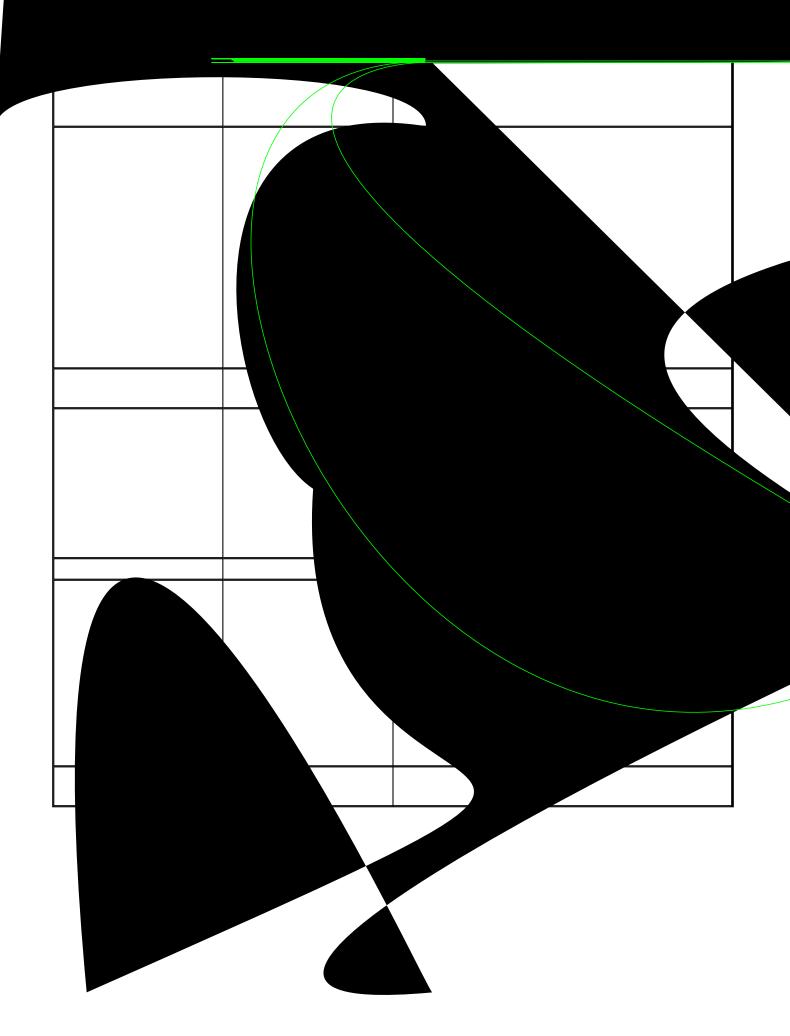
@Yb[h\. &\$\$\$ k cfXq

8YHJ]`q.

Gh XYbhg'k]``kf]hY'U'&\$\$\$!kcfX'dc`]\m\Vf]YZcb'U'diV`]\W\YU'h\']ggiY']b'5ighfU`]U'UZZY\M]b['df]gcb

dcdi `Uhjcbg`fY"["`a YbhU``\YU`h\žgi VghUbWr`i gYžcf`]bZYWfjci g`X]gYUgYgŁ":5``]ghcZY`][]V`Y`hcd]Wg`k]```VYdfcj]XYX`hc`ghi XYbhgžVUgYX`cb`h\Y``YWhi fYg":H\Y`ghi XYbhk]```VY`Ug_YX`hc`UXcdhh\Y`dYfgcbU`cZUb`]bhYfb Zcf`h\Y`8 YdUfha YbhcZ>i gh]WY`UbX`5 hcfbYml; YbYfU``k\c`\Ug`VYYb`Ug_YX`hc`dfYdUfY`U`Vf]YZ]b[`dUdYf`hc`U A]b]ghYf`cb`U`dc`]WmifYgdcbgY`hc`h\Y`W\cgYb`di V`]W\YU`h\]ggi Y"`H\Y`ghi XYbhg\ci `X`Wf]h]WU``mYl Ua]bY`h\Y

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5j U]`UV`Y`cb'A ccX`Y

FYWca a YbXYX FYgci fWYg

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

H\]g`Wci fgY`\Ug`i bXYf[cbY`Wcbf]bi ci g`Yj U`i Uh]cb`UbX`XYj Y`cda Ybhg]bW`]lg`Z[fghcZYf]b[`]b`&\$%+" Gh XYbhZYXVUW_fY[UfX]b[`h\Y`Wci fgY`\Ug`VYYb`Wc``YWYX`j]U`h\Y`I b]j Yfg]lmg`A m9I dYf]YbW`gi fj Ymg UbX`j]U`dYfgcbU``WcffYgdcbXYbW`k]h\ Wci fgY`ghUZZcf`h\]g`Wci fgY`\Uj Y`Wca d`YhYX`h\Y`I b]j Yfg]lmg : ci bXUh]cbg`cZI b]j Yfg]lm@YUfb]b[`UbX`HYUW\]b[`dfc[fUa žk\]W\`\Ug`Yei]ddYX`h\Ya 'k]h\ `YZYWf]j Y yj U`i Uh]cb`hcc`g`hc`UggYgga'h\Y`ghfi Wi fY`UbX`XY`]j YfmcZWci fgY`WcbhYbhzUggYgga YbhUbX`ZYYXVUW_" 9I Ua d`Yg`cZWci fgY`XYj Y`cda Ybh]b`fYgdcbgY`hc`ghi XYbhZYYXVUW_UbX`ghUZYj U`i Uh]cb`Zfca '&\$%-]bWi XY`Ub`UX^\ghiY`Zcf`UggYgga Ybhg`&`UbX`` z`UX^\gha Ybhg`hc`h\Y`cfXYf`cZ`YWi fYgz`UbX`bYk`m

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

D`U[]Uf]ga `]g`i g]b['h\Y`k cfXg`cf`]XYUg`cZch\Yfg`UbX'dfYgYbh]b['h\Ya 'Ug`mci f`ck b"'=h\Wb'hU_Y`a Ubm Zcfa qžZfca 'XY`]VYfUhY'W\YUh|b['hc`UWW]XYbhU`mWcdm]b['Zfca 'U'gci fW'k]h\ci h'UW_bck 'YX[Ya Ybh'

IBGK '[fci dg'd'U[]Uf]ga ']bhc'h\Y'Zc``ck]b['WUhY[cf]Yg.

7 cdm]b[.'i g]b['h\Y'gUa Y'cf'j Yfmg]a]`Uf'k cfXg'hc'h\Y'cf][]bU`hYl hcf']XYU'k]h\ci h'UW_bck `YX[]b['h\Y gci fW'cf'i g]b['ei chUh]cb'a Uf_g"'H\]g'U'gc'Udd`]Yg'hc']a U[Ygž'Ufh'UbX'XYg][b'dfc YWhgž'Ug'k Y``'Ug dfYgYbhUh]cbg'k \YfY'gca YcbY'dfYgYbhg'Ubch\Yf'g']XYUg'cf'k cfXg'k]h\ci h'WfYX]h'

± Uddfcdf]UhY 'dUfUd\fUg]b[.'7\Ub[]b['U'ZYk'k cfXg'UbX'd\fUgYg'k\]'Y 'a cghmfYhU]b]b['h\Y'cf][]bU' ghfi WhifY'UbX#cf'dfc[fYgg]cb'cZ]XYUg'cZh\Y'cf][]bU'žUbX']bZcfa UhJcb'k]h\ci hUW_bck 'YX[Ya Ybh''H\]g'U'gc Udd']Yg']b'dfYgYbhUhJcbg'k\YfY'gca YcbY'dUfUd\fUgYg'Ubch\Yf'g']XYUg'cf'k cfXg'k]h\ci h'WfYX]hUbX'hc d]YW]b['hc[Yh\Yf'ei chYg'UbX'dUfUd\fUgYg']bhc'U'bYk'k\c'Yž'k]h\ci h'Uddfcdf]UhY'fYZYfYbW]b['"

7 c``i g]cb. 'k cf_jb['k]h\ 'ch\ Yfg'Vi h'dUgg]b['cZZh\ Y 'k cf_'Ug'U'dYfgcb'g']bX]j]Xi U``k cf_"'7 c``i g]cb'U`gc]bWi XYg'dfcj]X]b['mci f'k cf_'hc'Ubch\ Yf'ghi XYbhVYZcfY'h\ Y 'Xi Y 'XUhYzcf'Zcf'h\ Y' di fdcgY'cZh\ Ya d`U[]Uf]g]b['Uh'Ubmh]a Yz'dUm]b['Ubch\ Yf'dYfgcb'hc'dYfZcfa 'Ub'UWUXYa]WhUg_z'ghYU']b['cf'UWei]f]b[Ubch\ Yf'dYfgcb'g' UWUXYa]Wk cf_'UbX'Wcdm]b[']hz'cZYf]b['hc'Wca d`YhY'Ubch\ Yf'dYfgcb'g' k cf_'cf'gYY_]b[dUma YbhZcf'Wca d`Yh]b['UWUXYa]Wk cf_"

±bUddfcdf]UhY`W]hUh]cb.`7]h]b[ˈgci fW/gˈk \]WX`\Uj Y`bchVYYb`fYUXžk]h\ci hUW_bck`YX[]b[ˈh\Y`″gYWcbXUfm″gci fW/Zfca ik \]WX`_bck`YX[Y`cZh\Ya`\UgʻVYYb`cVhU]bYX"

8 i d`]\WUh]cb`ffgY`Zd`U[]Uf]ga "Ł 'gi Va]hh]b['mci f`ck b`k cf_ž']b`k \c`Y`cf`]b`dUfhž'k \YfY`]h\Ug`dfYj]ci g`m VYYb`dfYdUfYX`cf`gi Va]hhYX`Zcf`Ubch\Yf`UggYgga Ybhcf`Wci fgY`UhI BGK 'cf`Ubch\Yf`i b]j Yfg]hm'

7 cffYWhfYZYfYbWb[dfUWhWyg.

• DUfUd\fUq]b[žqi a a Uf]q]b[žYqqUmk f]h]b[UbX h]a Y a UbU[Ya Ybh

5WUXYa]W±bZcfaUhjcb

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• fYei Yghg Zcf Yl hYbg]cb/