

6RXUGR&WOPSRQH+LVWRU\ RI &OLPELQJ

(VVHQWLDO 4XHZVWR RSQHRSOH LQWHUDFW DQWIRGHQ'DOL

6XJJHVWHG \$FWLYLWLHV

\$QDO\]H DQ 3KQDQGER KOS -OS +Ü°

- x 6KRZ SLFWXUHV RI WKH 6R\$VNG RXXJHG&HQDPSV RVQVG UDQZH D FSLQSWRXL WKH REMHFW
- x +DYH XGHQWV EUDLQVWRUP TXHVWLRQV WKH\ KDYH DERXW WK LQ VPDOO JURXSV RU DV D FODVV
  - o 6HH WKLUWHHQ 4XHVWLRQVKDRQGRXW\$ QRUE MHDPSOHV
  - o :K

DWUH VRPH ZD\V \RX FRXOG UHVHDUFK \RXU XQDQVZHU  
o :KDW FRXOG SHRSOH LQ WKH IXWXUH OHDUQ DERXW \RX I

\$ODVND +LVWRU\ &RQW&HSQ WW6XWGDQGD WERXOG GHYHORS WKH VNLOOV DQG SURFHVVH  
\$ODVND \$QFKRU 6WDQGDUGV (Q5OLVSHDQJMOBHWGWWVQH ZKDW WKH WHRWDNHDORHLSQD  
LQIHHQFHV IURP LW FLWH VSHFLIRFVWHDPSQH YLGHQFH ZKHQ ZULWLQJ

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#### &RPSDUH DQG &RQWUDVW

7LPH PLQXWHV

0DWHU&IDFOWXUHV RI 6RXU GDRQQ KFRQDPSRSQVU DSDLDUJU DRSRQWFLDOO\ D  
FUDPSRQV LI DYDLODEOH

'LUHFWRQV

- x /RRDPSLFWRXLWKW 6RXUGRXJK FUDPSRQV DQG \RXDPSRSQWV XVHG  
FUDPSRQV DYDLODEOH KDYH DQWNGHCOWR KDQGOH WKHP
- x 0DNH D OIL\$ \$ VWXGHQW VKRXOG XQGHUVWDQG WKDW KLVWR  
SUHVHQW DQG WKH IXWXUH

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#### &UHDWH D &UDPSRQ ORGHO

7LPH PLQXWHV

0DWHU&IDFOWXUHV RI 6RXUGRXJK &UDPSRQV DQG RRQWHDWPSRDWHDUNIFD  
SLSHFOHDQHUV SRSRGHQHGRWHDNV IHOW SLHFHV VWULQJ ZLUH  
LUHFWRQV

- x 6KRZ VWXGHQWW&HFGRXXLHGRXJK FUDPSRQV DQG FRQWHPSRUD  
SUREOHP FUDPSRQV DUH GHVLJQWGRWWR RIR&UDPSRSQWHU WR
- x %UDLQVWRUP ZLWK VWXGHQWV KRZ WKH\ FRXOG FRQVWUXFW

6RXUGR&WOPSRQH+LVWRU\ RI &OLPELQJ

- x , QWURGXFH WKH (QJLQHHULQJ 'HVL\\$QHB WRKHH SWRFLGHVZRNUXNGHQ SURJUHV  
o 2SWLRQD\OG HQWV FD(QJLQHHRUXVQ JW K\IZRQJ NURAHVVIRU HDF
- x +DYH VWXGHQWV PDNH WKHLRUXRQE QDFWDPLSWQ UPLRQDOHOV  
o 2SWLRQD\OG HQWV FDQ RGIWDZHISULFW\QBSRQ GHVLJQV EHIRUH  
VWXGHQWV DZD\GHDQYRDI\U\B\W\ VXSSOLHV
- x 'LVFXVV WKH IROORZLQJ TXHVWLRQV ZLWK \RXU VWXGHQWV  
o :KDW ZHUH WKH HDVLHVW DQG KDUGHVW SDUWV RI PDNLQJ  
o :K\ GR \RX WKLQN PHPEHUV RI WKH 6RXUGRXJK ([SHGLWLFDUH WKH DGYDQWDJHV DQG GLVDGYDQWDJHV RI PDNLQJ V  
o +RZ GLG WKH SURFHVV RI PDNLQJ D PRGHO KHOS \RX WR  
6RXUGRXJK ([SHGLWLRQ PHPEHUV"

:ULWH D -RXUQDO (QWU\

7LPH PLQXWHV  
0DWHU~~LD~~SHU S~~R~~XUGR XJK ([~~SH~~QGWRWQ RSWLRQDO  
'LUHFWRQV  
x :ULWH D MRXUQDO HQWU~~RD~~ RPH ~~W~~KHMU~~SH~~ L60RW UGR XJK ([SHGLWLR  
FOLPELQJ 'HQDOL 6XJJHVWHG SURPSWV LQFOXGH :K\ DUH \R  
RI XSSOLHV GHRX IHHO KXP0Å™,, PÀ FROG  
  
QDQFO WRXUGR XJK ([~~SH~~QGWRBQ  
H[SH@FOLR@  
O~~S~~RØJ

\$ 00 \$ RVWXGHVKX GGH D RWKVWRV RD RUHFTX RRKXDQ RHSHHFTH RV  
WRK SVHD WK I5€ : 008VHDYHWLTQX HHX SDDQG RHSHHFTH V RRHWV  
XLJ RHH L<sub>u</sub>YHFKL<sub>u</sub>TV 00ZO `KVH DOV 00DQG RZOO `WUXF 5€G RHHVHXFT HV

3 UHSRD HH

7 L•™p H 1 0 p@  
0 D•L•™p3 QU H U H ) Lf ð V Lf ð 3RKW R  
Lf ð FTð HG F D/P0 R š•P p 0  
' U x ' L...™€ S Lf ð J W R FTð P E '  
7 H ' WP Lf ð R P D  
WKR W F' HHW/H Z L,TWUDR W K ZDW K H R L  
|  
o ) RX J H X " G Lf ð VPð S...™€ SR L† p H S L,™UHFUp  
o (U° uHY V Lf ð





6RXUGRXJK &UDPSRQV 7KH +LVWRU\ RI

7KLUWHHQ 4XHVWLRQV WR \$VN DQ

: KDW DUH W~~KSHK\~~RE~~MDIO~~WS~~UVR~~ SHUWLHV

x 0DWHULD~~O~~ V

x 6L]H

x :HLJKW

x 1XPEHU RI SDUWV

x ,V DQ\WKLQJ ZULWWHQ RU GUDZQ RQ LW"

: KDW ~~WKH~~ REWHQF~~W~~ SURSHUWLHV

x 6LJKW 7RXFK 6~~RDX\QGH~~ 6~~R~~H~~Q~~QRXU LPDJLQDWLRQ

: DV WKH RE~~Q~~HMFRW D~~D~~W~~KH~~HDQ V"

+ RZ GR KXP DQV R~~Q~~WD~~Q~~W~~KH~~ W KH REMHF~~W~~"

: KDW LV W~~K~~SIXRUS~~M~~HW~~V~~

: KDW RWLRQV WKRXJ~~K~~ORUR L~~G~~H~~Q~~G/ ZKH~~A~~ODWP~~FW~~ " K @ R

6RXUGRXJK &UDPSRQV &KHL PHILIPPIQR'WH\QRI

+LVWRU\ RI WKH 6RXUGRXJK ([SHG]



&KDUOLH OF\*RQDJDOO DQG 6RXUGRXJK ([SHGLWLRQ OH  
WKH IRRW FDPS RQ 0W 0F.LQOH\ GXULQJ WKHLU  
1RUWK 3HDN &RXUWHV\ \$ODVND 6WDWH /LEUDU\ \$6/ 3

7KH ILUVW SHRSOH WR FOLPE 'HQDOL 0RXQW 0F.LQOH\ GLG LW

,W DOO VWDUWHG ZKHQ D JURXS RI JX\V ZHUH WDONLQJ LQ D )  
)UHGHULFN &RRN KDG MXVW SXEOLVKHG D ERRN FODLPLQJ KH P  
ZHUH DOO FRQYLQFHG WKH IDPRXV H[SORUHU ZDV O\LQJ \$ODV  
FLW\ FRXOG KDYH GRQH LW 7KH EDU RZQHU VDLG KH GLGQ W E

7RP /OR\G WRRN WKH EDLW +H ZDV D PLQHU ZKR KDG VSHQW P  
DQ\RQH +H EUDJJHG WKDW KH NQHZ KRZ WR JHW WR WKH WRS  
/OR\G WROG KLP , PD\ EH EXW , FDQ ILQG PHQ ZKR ZLOO GR I  
WR SURYH &RRN GLGQ W PDNH WKH FOLPE

2QFH WKH QHZVSDSHUV JRW KROG RI WKH VWRU\ WKHUH ZDV G

7KH \HDU ROG /OR\G JRW WRJHWKHU D WHDP RI IHOORZ PLQH  
3HWHU \$QGHUVRQ WR WDFNOH WKH PRXQWDLQ 7KLV JURXS KD  
PRXQWDLQ 7KH\ NQHZ WKH DUHD DV ZHOO DV DQ\ERG\ ,Q 'HFH  
D PXOH DQG D GRJ WHDP 7KH\ KHDGHG VRXWK WRZDUG WKH P  
WHPSHUDWXUHV KDG ZDUPHG WR GHJUHHV VHWWLQJ UHFRU

%\ HDUO\ )HEUXDU\ WKH\ ILQDOO\ UHDFKHG .DQWLVKQD 7KH\ V  
&DFKH &UHHN )URP WKLV VSRW DW DERXW IHHW LQ HOHYD  
PRXQWDLQ %DVHG RQ KLV SUHYLRXV H[SHULHQFH /OR\G ZDV P  
PRXQWDLQ ZDV WR IROORZ WKH 0XOGURZ \*ODFLHU ZKLFK WKH  
VXFK KLJK ZDOOV RQ HDFK VLGH





# 6RXUGRXJK &UDPSRQV 7KH +LVWRU\ RI

6RPH EHOLHYH WKDW /OR\G VXIIHUHG DOWLWXGH VLFNQHV V DQ  
RWKHUV FOLPEHG WR WKH VXPPLW 8QIRUWXQDWHO\ KH FRXOC  
EHHQ ZLWK WKH VXPPLW WHDP +H ILFWLRQDOL]HG KLV MRXUQ  
HYHU\RQH TXHVWLRQ ZKHWKHU DQ\RQH KDG PDGH WKH VXPPLW  
WR VWDWH HPSKDWLFD O\ WKDW , SHUVRQDOO\ FRXOG QHYH  
\$QGHUVRQ &KDUOH\ OF\*RQDJDOO DQG %LOO 7D\ORU , ZLVK W  
IDU VXSHULRU WR PH LQ DELOLW\ DW DQ\ VWDJH RI WKH FOLPE  
EHIRUH DQG EHKLQG DQG , NHSW FDPS

6WLOO KLV OLHV FDXVHG GRXEW IRU \HDUV 6HYHUDO DWWHPS  
PHPEHUV RI +XGVRQ 6WXFN V H[SHGLWLRQ VSRRWWHG WKH  
DQG SXW WR UHVVW DOO GRXEW DERXW WKH LQFUHGLEOH IHWD

6RXUFHV

7KH 6RXUGRXJK ([SHGLWLRQ 6WRULHV RI WKH 3LRQHHU \$ODVN  
HGLWHG E\ 7HUUHQFH &ROH \$ODVND 1RUWKZHVW 3XEOLVKLQJ  
7R WKH 7RS RE\ %HOOO\KHUZRQLW \$ODVND 1RUWKZHVW %RRNV

,QIRUPDW\ 6RXUGRXJK &OLPEHUV  
ZZZ DODVNDNLGV RUJ LQGHJ FIP NQRZ DODVND \$ODVND +LVWRU

6RXUGRXJK &UDPSRQV &IOH PHLVWQR'WH\QRDI

+LVWRU\ RI &UDPSRQV







6RXUGRXJK &UDPSRQV 7KH +LVWRU\ RI

6RXUGRXJK &UDPSRQV 7KH +LVWRU\ RI

7HDFKLQJ 7KURXJK &ROOHFWLRQV 3URMHFW  
1DWLRQDO 3DUN 6HUYLFH &RRSHUDWLYH \$JUHHPHQW 3 \$&

ZZZ XDI

6RXUGRXJK &UDPSRQV 7KH +LVWRU\ RI

3UHSDUH )RU <RXU ([SHGLWLRQ

<RX DUH D PHPEHU RI DQ H[SHGLWLRQ SODQQLQJ W  
PDNH D OLVW RI DOO WKH HTXLSPHQW DQG VXS  
:RUN ZLWK \RXU JURXS PHPEHUV WR PDNH \F

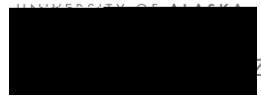
5HPHPEHU WR FRQVLGHU

x :HLJKWRX FDQ RQO\ ~~SRDXUQGV~~  
~~SHU SHUVRQ~~

x 6DIHWKRX ZLOO QHHG VDIHW\ HTXLSPHQW

x :HDWK\HPSHUDWXUHV RQ 'HQDOL  
FDQ UHDFK GHJUHHV )DKUHQKHLW  
DQG VWURQJ ZLQGV DUH FRPPRQ

x )RRG DQG :DWHU



6RXUGRXJK &UDPSRQV 7KH +LVWRU\ RI &OLPE  
3UHSDUH )RU <RXU ([SHGLWLRQ (TXLSPHQW

6NLV  
SRXQGV

6QRZVKRHV  
SRXQGV

%DFNSDFN  
SRXQGV

6KRYHO  
SRXQG

'XFW 7DSH  
SRXQG

7HQW  
SRXQGV

6RXUGRXJK &UDPSRQV 7KH +LVWRU\ RI &OLPE

3UHSDUH )RU <RXU ([SHGLWLRQ (TXLSPHQW

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SRXQGV

%RRWV  
SRXQGV IRU SDU

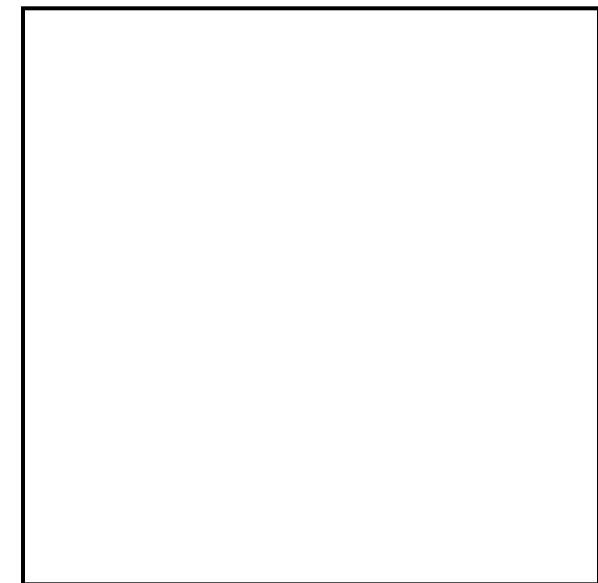
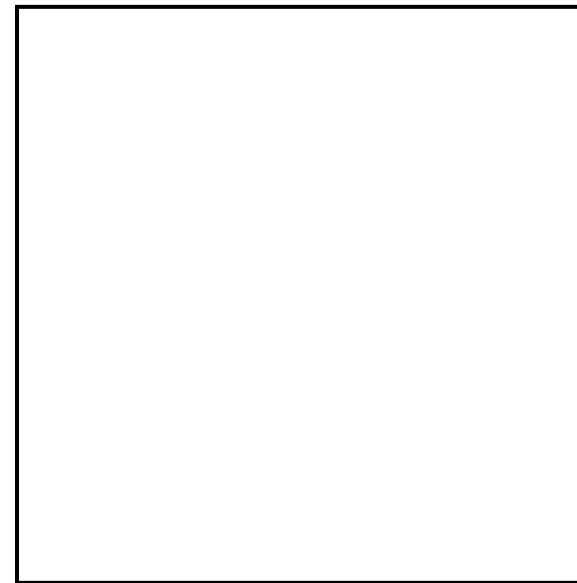
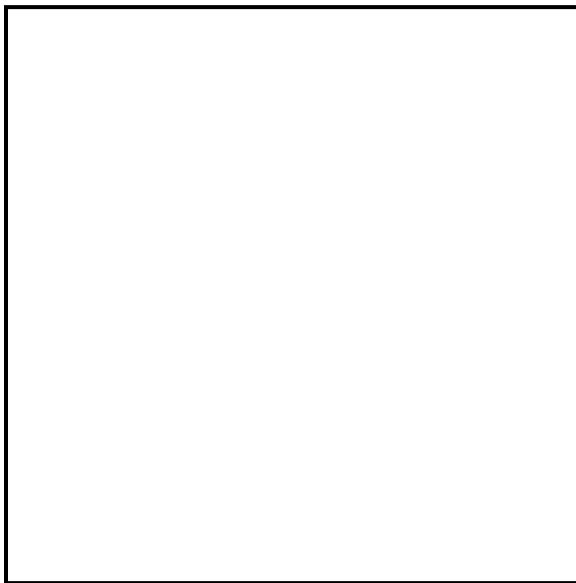
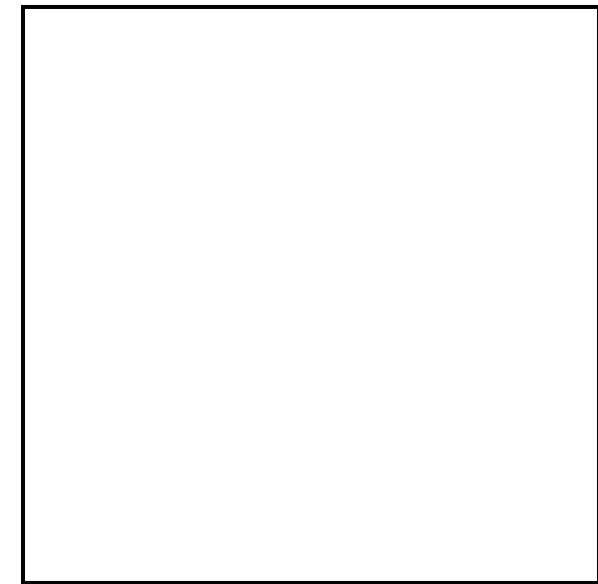
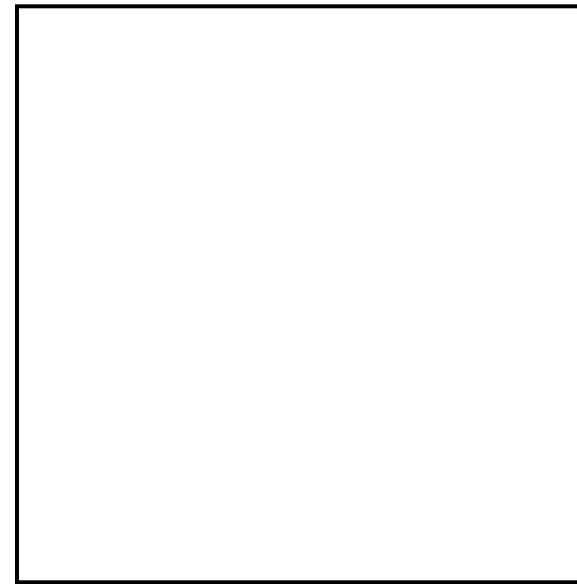
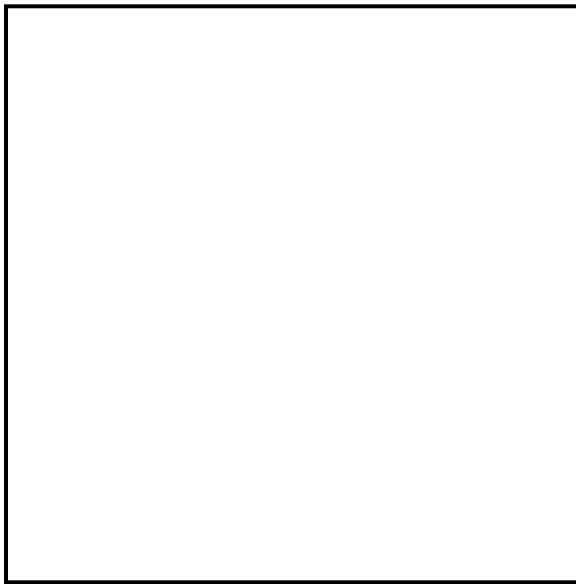
3DUND  
SRXQGV

OLWWHQV  
SRXQG IRU SDLU

\*RJJOHV  
SRXQGV



6RXUGRXJK &UDPSRQV 7KH +LVWRU\ RI &OLPE



7HDKQL7KURXJK &ROOHFWLRQV 3URMHFW  
1DWLRQDO 3DUN 6HUYL FH &RRSHUDWLYH \$JUHHPLHQWDI3H\$& PXVHXP

UNIVERSITY OF ALASKA

