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\$ E W M D F W 7 K L V S D S H U G H O H V L Q M D Q H Q Y L L R Q P H Q M D G Y R F D F \ F D P S D L J Q E D V H G L Q W H
6 D O P . H J H U M F K R R O G L W I F W D Q G V X I U R X Q G Q J Q H J K E R U K R R G V W D M Z D V U H F H Q Q \ O X Q F K H G E \ W H
6 W D X E (Q M L R Q P H Q M D & H Q M U 7 K H F D P S D L J Q W M G 1 D M U D Q I D \$ K R U D H P E R G I H V D P H D M X U H R I
H L H Q F H W D M W U H I O F W G L Q I W J R D Q D Q G W D M J I H V D Q G , L Q M M W H R D p

7R EHJLQ , WXUQ ILUVW WR WKH PRVW1 DFWXHMDVQH JKH D
\$KRUSDV D FDVH VWXG\ , W LV DHQ YH[B R Q H Q W DHQ DDPGSYORF B F \D
IRU ZKLFK 3KDHGUD & 3H]]XOR DQG 5REHUW & R[JLYH D FR
(QYLURQPHQWDO & RPPXQLFDWLRQ DQG WKH 3XEOLF 6SKHU
LQYROYLQJ FRPPXQLFDWLRQ ZKLFK LWDXWQXGUHDUWHDQHORRBD D
PHHWV WKH :RUOG +HDOWK 2UJDQL]DWLRQ¶V :+2 GHILQLW
IXOILOOV WKH DFURQ\P μ6 0 \$ 5 7 ¶ WKDW WKH :+2 LQFOXG
KHDOWK UHODWHG DGYRFDFJ\ FWDQJKSDWL JLQW 6\$PHFLQ LQJ OHWD KDW
\$FKLHYDEOH 5HDOLVW\ X DQGHV\ VDRSKOB\\$B\ QGRDO LV ³WR GR
QXPEHU RI /DWLQR VWXGHQWV ZKR SDUWLFLSDWH LQ RXWG
KHOS WKHP GHYHORS VRFLDO DFDGHPLF DQG ZRUNIRUFH
HGXFDWLRQ « LQ QDWXUH ' :H FDQ EHJLQ WR HOXFLGDWH V
LWV UHO DFWXQXV\ KDS WDRW\ JURQDQD\ WFKHU D UHFRJQL]HG ZU
SROLWLFV H[SODLQV WKDW FXOW XQDYQURQW\ IHRQW\ DQW\ V
DQ\ SUDFWLFH RU WUHQG WKDW HQGDQJHUV FHUWDLQ HQY
PDUJLQDOL]HG JURXSV WKHUHLQ DUH FRPPXQLFDWHG WR
LQYROYHG IURP WKH ORFDO WR WKH IHGHUDO OHYHO)LV
WUDGLWLRQDO VRFLDO DQG SHHU JURXSV FXOWXUDO UD
IXOO\ UHOHYDQW WR QHDU WHUP GHFLVLRQ PDNLQJ DQG W
1DWXUDO\ \$KVRQD FXOWXUDO UDWLRQDOLW\ VXUURXQGLC
QDWXUH EDVHG OH DULQJ\ QPJP\ QLDF\ DWW\ WKRQLOP\ SRRU WDQW WR QRW
EHLQJ FRPPXQLFDWHG LQ WKLV FDVH VWXG\ LV RQH IRU ZK

LQ GHSWK UHVHDUFK GXH LQ SDUW WR LWV LPPHDVXUDEO
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WKDW FRPPXQLWLHV GR QRW QHFHVVDULO\ QHHG H[SHUWV
H[SRVXUH RI FKLOGUHQ DQG DGROHVFHQWV WR WKH RXWGI
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KRXUV SHU GD\ RI VFUHHQ WLPH' HIIHFWLHYO\ XWLOL]L
DQ HPERGLPHQW RI WKHLU FXOWXUDO UDWLRQDOH WKHLU
6DOHP .HL]HU DUHD

7DNLQJ WKH H[DPSOH DERYH DV D PRGHO IRU V\QWKHV
PRGHOV RI ULVN FRPPXQLFDWLRQ , OLIW XS D KDQGIXO RI
SV\FKRORJ\ MRXUQDOV DQG SHULRGLFDOV 7KH ILUVW VWX
E\ 1RRVKLQ 5D]DQL DQG ILYH RWKHU UHVHDUFKHUV ZKR

& DOLIRUQLD 6DQ)UDQFLVFR\ V FKLOGUHQ\ V KRVSLWDO %H
3'HVLJQ DQG HYDOXDWRQ RI D SDUN SUHVFULSWLRQ SURJU
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EHQHILWV DVVRFLDWG ZLWK QDWXUH EDVHG DFWLYLWLHV
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DXGLHQFH LQ D FRXQWU\ ZKRVH GPLQLVWUDWLRQ DQG KI
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, & (UD1DGWXUDO\ \$KURRUDDUH VVH
ZKR DUH IDFLQJ WKH VH VVH FUHDWLQJ D VSDFH WK
(QJDJHPHQW 7HDP DQG PD\ SURYLGH LPPHDVXUDEOH EHQH
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'DYLG 6WUD\HU SV\FKRORJ\ SURIHVVRUV IURP WKH 8QLYHU
UHVSHFWLYHO\ 7KHLU VWXG\ WLWOHG 3&UHDWLYLW\ LQ W
, PPHUVRQ LQ 1DWXUDO 6HWWLQJV' H[DPLQHV WKH QDWXU
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SUHIURQWDO FRUWH[SURFHVVHV DVVRFLDWG ZLWK WKLQ
VHOHFWLYH DWWHQWLRQ \$QQ \$WFKHO\ DQG 6WUD\HU SRLO
DSS FHQWULF VRFLHW\ WKH VH PHQWDO IXQFWLRQV DUH IU
WKLV FDQ GUDVWLFDOD\ OLPLW WKHL UDMXQFDQH\ \$KRMU DR Y
GLJLWD OI\ D8LQWQH LVVXH WKH\ DUH DGGUHVVLQJ /DWLQ

LQWHUDFWLRQ DQG DQ DYHUDJH RI KRXUV RI VFUHHQ WL
\$WFKHO\ DQG 6WUD\HU\ VVWXG\ DGGV H[WUD YDOLGLW\ WR
7KH ILQDO VWXG\ ZDV FRQGXFWHG E\ 0LFKDHO &DPDVVR DG
8QLYHUVLW\ RI 1HZ -HUVH\ &DPDVVR DQG -DJDQQDWKDQ G
WKURXJK 1DWXUH RU ³1W1 SURJUDP DQG LPSOHPHQW HG
VFKRRO LQ 1HZ %UXQVZLFN 1- RYHU WKH FRXUVH RI \HDL
SURJUDP ZKLFK LV QHDUO\ LGHQWLFD O WR 6WUDXE\ V RXW
GHPRQVWUDWHG D VWDWLVWLFDOO\ VLJQLILFDQW DGYDQW
PDWKHPDWLFV DV ZHOO 7KLV VWXG\ VKRZV WKDW D SURJU
1DWXUDOHSURJUDP DQG VLJQLILFDQW EHQHILWV IRU HOHPHQW
UHVHDUFKHUV IUDPHG WKHLU VWXG\ DV D PRGHO IRU LQWH
GLVDGYDQWDJHG EDFNJURXQGV DJDLQ YHDXW XFLUDROMHJO\ \$LKQR
IUDPHV WKHLU LQLWLPWLYH

:LWK DOO RI WKH VHVH VWXGLHV LQ PLQG , DVN WKH UHD
VWXG\ DV LW H[LVWV LQ WKH ZRUOG RXWVLGH RI WKH SDU
MXVWLILFDWLRQV WKDW FODVVLI\ LW DV DQ HQYLURQPHQW
60\$57 JRDOV DQG IRUHVLJKW LQ XWLOL]LQJ ERWK WKH FXO
FRPPXQLFDWLRQ , KDYH EURXJKW XS WKUHH SURPLQHQW V
VXSSOHPHQW WKH WHFKQLFDO FRPPXQLFDWLRQ RI WKH FD
QXDQFH V RIIDWWKHUZOHJDH\$KORUVW WKH WDFWLF RI IUDPLQJ)LO
WKH UHDGHU WR[LWK RDPWRQBA SWKRW GHVFULEHV DQ\ VRUW R
D VHQVH R1DXWXRQDHDKRQDUHDOLHV WKLV VLWXDWLQJ

WLWOH RI WKH FDPSDLJQ LWVHOI , DVSLUH IRU WKLV UHSF
WKH UHDGHU PD\ UHIOHFW RQ H[LJHQFLHV HQYLURQPHQWD
FRPPXQLW\ FRPPXQLWLHV , DOVR KRSH WKDW WKLV UHSRU
UHJDUDQWQJUDO H]DK\$KVRULW LV WU\LQJ WR GR KRZ LW LV GR
DQG ZK\ , HQG WKLV UHSRUW ZLWK D UHPLQGHU WKDW WK
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VSKHUh ' /RV \$QJHOHV 6\$*(3XEOLFDWLRQV 3ULQW
³6WRS WKH JOREDO HSLGHPLF RI FKURQLF LOOQHVV D
'HSDUWPHQW RI &KURQLF 'LVHDVHV DQG +HDOWK 3URPRWL
KWWs ZZZ ZKR LQW FKS DGYRFDF\ FKS PDQXDO (1 ZHEILQ
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&DPDVVR 0LFKDHO - -DJ DQWDWKDQ 5DGKD ³, PSURYL
VFKRROV WKURXJK QDWDQFH LEGDJVHGR XUHODDOSIBQ J(GXFRBWL RQ
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1DWXUDOHD \$KRUD 1DWXUH 1RZ ZHE SDJH ORFDWHG
KWWsV ZZZ VWUDXFH QWHU RUJ QDWXUDOHD DKRUDQDW