

“Don’t Call Us”

Governments, Cyber Security, and
Implications for the Private Sector

Tom Q



Centre for
International and
Defence Policy

Occasional
Papers
66

· ' R Q • W & D O
* R Y H U Q P H Q W V & \ |
, P S O L F D W L R Q V I R U W

7 R P 4 X L J J L Q

/LEUDU\ DQG \$UFKLYHV &DQDGD &DWDORJXLQJ LQ 3XEOL
4XLJJLQ 7KRPDV

< &RS\ULJKW

;HISL VM *VU[LU[Z

)RUHZRUG

Y

7KH 3UREOHPV

7KH &ULWLFDO ,VVXHV

7KH 2XWORRN

&RQFOXVLRQV

1RWHV

*ORVVDU\

6HOHFW %LEOLRJUDSK\

-VYL^VYK

,Q WKH ODVW GHFDGH WKH UDSLQ DQG JOREDQ
FDXVHG DQ H[SDQVLRQ RI WKH QDWLRQDO VHF
GHYHORSHG GHPRFUDF\ 7KH LQFUHDVLRQJ GHS
FUHDWHG DQ LQFUHDVLRQJO\ YXOQHUDELOLW\
&RPSXWHU V\VWHPV WKDW ZH XVH ZLWKRXW F
UHDGLO\ DQG VRPHWLPHV YHU\ HDVLO\ FRPSU
WR H[SORLWDWLRQ WKXV SRVHV D VLJQLÀFDQ
V\VWHPV³JRYHUQPHQWV ÀUPV DQG VRFLHW\
WRU ZKHUH WHFKQRORJLFDQ FQDQJH LV FRQV
QDWLRQDO UHJXODWLRQ LV FKDOOHQJHG E\ W
WKH LQWHUQHWH JRYHUQPHQWV KDYH EHHQ KD
RI WKLV DVSHFW RI QDWLRQDO GHIHQFH E\ SX
GHIHQFH DJDLQVW F\EHU H[SORLWDWLRQ DFUR
7R EH VXUH JRYHUQPHQWV KDYH ODLG RXW
ZLWK WKH LQWHQWLRQ RI VWUHQJWKHQLQJ WK
WKH SULYDWH VHFWRU WR GHDO ZLWK F\EHU
6WDWHV %ULWDLQ \$XVWUDOLD DQG &DQGD
WKDW IHDWXUH FHUWDLQ FRPPRQ HOHPHQWV
LQJ WKLV QHZ GLJLWDO ZRUOG KDV EHHQ HOX
,Q WKLV 2FFDVLRQDO 3DSHU 7RP 4XLJJLQ H
IRU WKH SULYDWH VHFWRU³DQG WKH ÀQDQFLD
GLIÀFXOWLHV \$Q H[SHUW LQ WKH LQWHOOLJH
QXPEHU RI VWUXFWXUDO UHDVRQV LQFOXGLQJ
LW\ PHDVXUHV EHLQJ HPEUDFHG DFURVV WKH J
XQDEOH WR GHYHORS HIIHFWLYH F\EHUVHFXULY
WKH HFRQRP\ :KLOH JRYHUQPHQWV FRQLQX
F\EHU GHIHQFH PHFKDQLVPV DFURVV DOO VHF

YL 'RQ'W &DOO 8Vμ

,+VU»[*HSS <Z1!
.V]LYUTLU[Z *`ILY :LJ\YP[` HUK
0TWSPJH[PVUZ MVY [OL 7YP]H[L

,QVWLWXWLRQV WKDW GHSHQG RQ FRPSXWHU
WKH\ KDYH WR GHSHQG RQ WKHLU RZQ UHVXR
DWWDFNV \$V -DVRQ +HDOH\ WKH IRUPHU :KLW
VWUXFWXUH 3URWHFWLRQ KDV DGPLWWHG LI
F\EHUZDU \$PHULFDQV ZRXOG EH IDU EHWWHU

'RQ<W &DOO 8Vμ

%HFDXVH RI LQIRUPDWLRQ WHFKQRORJ\ ,7
ZRUGV WKH FRPPRQDOLW\ RI V\VWHPV DFURV
LQVWLWXWLRQV ZLWK VLJQLÀFDQW ,7 LQIUDV
HTXDOO\ RU LQ PDQ\ FDVHV HYHQ PRUH YXOQ
VPDOO WR PHGLXP ,7 LQIUDVWUXFWXUHV 2Q W
,7 RULHQWHG VHFXULW\ LQVWLWXWLRQV WKDW
LQ WKH ODVW ~~WZRVW~~ WKDW WKH SHUFHSWLR
DUH LQKHUHQWO\ EHWWHU SURWHFWHG DJDLQ
3HHU WR SHHU 3 3 VKDULQJ RQ WKUHDW
PHDVXUHV LV DQG ZLOO UHPDLQ D KLJK YDOXH
IRUZDUG OHDQLQJ LQWHUQDO PRQLWRULQJ SU
LQWHOOLJHQFH FROOHFWLRQ 7KH RXWVRXUF
VHFXULW\ PRQLWRULQJ LV D KLJK ULVN RSWL

7KH 3UREOHPV

&\EHU DWWDFNV DQG F\EHU H[SORLWDWLRQ ZL
ULVN *RYHUQPHQW W\SLFDOO\ UHVSQRVLEO
DVVHWV RQ WKH WHUULWRU\ RI WKH VWDWH I
GRPHVWLF LQWHUQDWLRQDO FULPLQDO DFWLY
UHTXLUH SURWHFWLRQ

\$PRQJ WKH FULWLFDO DUHDV RI ZHDNQHVV
DQG RU ODZ DQG UHJXODWLRQV DUH WKH IROC

‡ 7KH ODFN RI WKHRU\ RU SUDFWLFDO DFWLY
WDOLDWLRQ DQG RU HVFDODWLRQ FRQFHUQ
RULJLQDWLQJ IURP IRUHLJQ VWDWHV

‡ 7KH UHODWLYHO\ ORZ SULRULW\ WKDW PRVW
IHQFH LVVXH GHVSLWH D QXPEHU RI SXEOL

‡ 7KH OLPLWHG NQRZOHGJH DQG H[SHUWLHV
XQGHUWRRG UROH RI LQVLGHU WKUHDW DQ

‡ 7KH UHODWLYHO\ ORZ LQYHVPHQW WKDW
LPSURYLQJ WKH VHFXULW\ RI WKHLU SURGX
PDLQVWUHP SURGXFWV RU VHUYLFHV VRIW
ÀQDQFLDOO\ OLDEOH IRU GHIHFWV LQ WKHLU

‡ 7KH VORZ UHVSQRVH RI WKH 8QLWHG 6WDWH
,Q PRVW RWKHU DUHDV RI LQWHUQDWLRQDO
6WDWHV LV QRUPDOO\ D OHDGLQJ LQWHUQD

'RQ<W &DOO 8Vμ

,Q WKH PHDQZKLOH KRZHYHU F\EHU YXOQH
F\EHU DWWDFN WRROV DQG PHWKRGRORJLHV D
WHFKQLFDO FDSDFLW\ RI PDOLFVLRXV DFXORW VYL
VWDWHV DQG ODUJH WUDQVQDWLRQDO JURXS
LPSXQLW\ JLYHQ WKH ODFN RI LQWHUQDWLRQD
VWLWXWHV D SURSHU VHULHV RI UHVSROVHV

'XULQJ WKH &ROG :DU GHWHUUHQFH ZDV ZHO
\$ 'ODGGHU RI HVFDODWLRQμ UDJHG IURP FRQ
FDO FKHPLFDO DQG ÀQDOO\ QXFOH DU UHVSRO
XQGHUVWRRG E\ ERWK RI WKH VXSHUSRZHUV D
QRQ VWDWH ~~ORWH~~ UUVXOHVμ ZHUH LQLWLDOO\ X
WKH WKUHH PDLQ GRPDLQV RI FRQÁLFW ODQG
VKDUHG IUDPHZRUN H[LVWHG IRU XQGHUVWDQ
WLRQ RU FRQÁLFW PLJKW GHYHORS 7KHVH UX
H[WHQG LQWR RXWHU VSDFH DV LW HPHUJH

/LNHZLVH WKH HPHUJHQFH RI F\EHUVSDFH D
KDV QRW EHHQ DFFRPSDQLHG E\ D JHQHUDOO\ D
ZKLFK ZRXOG SURGXFH DQ LQWHUQDWLRQDOO\
DQG HVFDORWHU WKUH LV QR LQWHUQDO
ZLWKLQ PRVW JRYHUQPHQWV³LQFOXGLQJ WKH
OLNHO\ WR HPHUJH LQ WKH LPPHGLDWH IXWXUH
WDUJHWLQJ LQ F\EHU VSDFH 2U DV SXW DQR
LPSURYH WKUHVKROGV IRU ZDU LQ VSDFH DQG
QRW QXFOH DU ZDU³FRXOG EHFRPH SHULORXVO

2Q WRS RI WKH LQKHUHQW FRPSOH[LWLHV D
F\EHU GRPDLQ D VKDUHG LQWHUQDWLRQDO IUD
KDYH WR EULGJH FXOWXUDO GLYLGHV IRUFH
VWUDWHJLHV DQG REMHFWLYHV QDWLRQDO DQ
SURFHVVHV DV ZHO DV `€ LL

HV UR @ Pof [€pVUUHQFEDP€ð€ d€`€P RCOO ð€°ÀpL0K

DQG LPPLJUDWLRQ LVVXHV DQG DKHDG RI HQV
7KH FRPSDUDEOH GRFXPHQW IURP 3XEOLF 6DI
WKDW F\EHU LVVXHV DUH D 'FRUQHUVWRQHµ R
LQ DFWXDO SULRULW\ VHWWLQJ ROKH \$XPSDULO
JRYHUQDPSHQWURVKDYH D VWURQJHU LQWHUHVW
VHFXULW\ DV D 'WRS WLHU QDWLRQDO VHFXULV
DQG HFRQRPLF ZHOO EHLQJ RI WKH VWDWH DV
WKH LQWHJULW\ RI FRPSXUHWLQJ WLQJ GRP DOV
D F\EHU VWUDWHJ\ LQ DQG LW SXVV F\EHU
DGH W<KH (Q ÀQV@0€P•DY•OV<Di0SYP 7K
E @ `PGHS @ VW UfHPÀ € pçH0V' @ U`Q•0A

'RQW &DOO 8Vμ

LQVLGHU ~~DKWVLSURE~~EOHP LV EHLQJ LQFUHDVLQ
GH OHJLWLPL]DWLRQ RI WKH VWDWH DQG LWV
LV EHLQJ FRPSRXQGHG E\ WKH FXUUHQW HFRQ
VSRQVRUHG DXVWHULW\ PHDVXUHV DQG WKH P
WR GHDO ZLWK HPHUJLQJ ~~VHPXFDXWLF~~OV ~~SDREO~~
H[SHULHQFLQJ D SDUWLFXODU\ GLIÀFXOW VHV
GHPRFUDFLHV KDYH GHYHORSHG LQFUHDVLQJ
GHPRFUDWLF SURFHVVHV +RZHYHU WKH DELO
FRPSOH[LWLHV DQG WKH DWWHQGDQW SUREO
WLP\$V D UHVXOW LQVLGHU WKUHDWV DUH LQ
WKHVH VRUWV RI SUREOHPV ZLOO EH GLIÀFXO

6RIWZDUH 0DNHUV

:LWK D IHZ QRWDEOH UH~~PHQDWH~~ERSWQRGLVÀFX
ZDUH PDQXIDFWXUHUV IRU VHFUXLW\ RU SHUIR
:LWKRXW WKLW DELOLW\ VRIWZDUH PDQXIDFW
DV DQ DIWHUWKRXJKW DQG RQO\ UHDFW ZLWK
DIWHU WKH IDFW DFWLYLWLHV 7KH\ DOVR RZQ
VHOO 'VROXWLRQVμ WR WKHLU RZQ SUREOHPV
GRHV QRW DSSHU WR EH LPPLQHQW LQ (XURS
7KH TXDOLW\ RI WKH VRIWZDUH LV HTXDOO
GHIHQVLYH PHDVXUHV SXW DURXQG QHWZRUN
DV WKH TXDOLW\ OHYHOV DSSOLHG WR DLUFU
LPPXQLW\ WR DWWDFNV EDV~~H~~GFROWWVWVWQORZ
VRIWZDUH VWDQGDUGV DUH JHQHUDOO\ DSSOL
VR IDLOXUHV DQG YXOQHUDELOLW\ WR DWWDFN
IDFWXUHUV JHQHUDOO\ RQO\ VHULRXVO\ FRQV
DQG WKHQ DSSO\ D 'SDWFKμ PHQWDOLW\ WR V
LQG XVWU\ DQG WKH FRPSOH[LW\ RI WKH SUREO
:HVWHUQ JRYHUQPHQW ZLOO DPHQG OHJLVODW
WKDW ZLOO HQFRXUDJH VRIWZDUH PDQXIDFWXU
SURGXFW E\ H[SRVLQJ WKHP WR JUHDWHU OHJ

\$PHULFDQ /HDGHUVKLS

'HVSLWH SUHVXUH IURP ERWK WKH SULYDWH V

F\EHU WKUHDWV IURP ZKHQ WKH ÀUVW HPH
DWWDFNV RFFXUUHG WR 7KHUH DSSHUV
LQWHUHVW DQG DFWLYLW\ IURP RQZDUGV
ÀUVW HIIRUWV ZHUH IRFXVHG RQ PLOLWDU\ V\

'1RQ<W &DOO 8Vμ

KDV QRW EHHQ PDGH FOH DU DQG WKH OHJLVODWLRQ
RYHU FRPSHWLQJ OHJLVODWLRQ PD\ HYHQWXD

*DSV EHWZHHQ 5HDOLW\ DQG *RYHUQPHQW .QRZ

*RYHUQPHQW EDVHG DQDO\VLV WHQG V WR OD
NQRZOHGJH FUHDWLRQ HIIRUWV FRQFHUQLQJ F
SUHVFULSWLRQV FRQWDLQH LQ D VHULHV RI
ZHUH EDVHG RQ DQG *LYHODWLRQV SURF
WKH F\EHU ZRUOG WHQG V WR HYROYH LQ SHULF
HUQPHQW UHVSQRVH EDVHG LQ DQ DVVHVVPHQ
WR EH HIIHFWLYH

,QWHUQDWLRQDO /DZ (QIRUFPHQW DQG ,QWHOO

'HVSLWH SXEOLF FRPPHQWV WR WKH FRQWUDU
LQWHUQDWLRQDO VKDULQJ DQG FRRSHUDWLRQ
JDWLRQV LV QRW HQFRXUDJLQJ 2QH SDUWLFX
EHWZHHQ QDWLRQDO JRYHUQPHQW DJHQFLHV
IRUPHU :KLWH +RXVH 'LUHFWRU RI &\EHU ,QIUD
-DQXDU\ ' *RYHUQPHQW RQO\ LQKDOHV LW
WKH LQIRUPDWLRQ EXW LW ZLOO ÀQG DQ\ H[F
,QWHUQDWLRQDOO\ WKH VLWXDWLRQ LV QR
GLVSXWHV FRPSOH\ OHJDO UHTXLUHPHQWV DQ
SDUW RI VRPH PDMRU JRYHUQPHQWV KDYH JU
LQYHVWLJDWLRQV \$V ZLWK GHWHUUHQFH DQG
DWH À[HV LQ VLJKW DQG QR UHDVLRQ WR EH RS
À[HG LQ WKH QH DU IXWXUH

2XWVRXUFLQJ

:KR ZULWHV \RXU FRGH WKDW LV LQ \RXU VHF
NQRZ DERXW LW" '1RW PXFKμ LV WKH OLNHOLHY
LQFOXGLQJ VRIWZDUH VHF\ULW\ FRPSDQLHV D
WR VXE DQG WR VXE YXIEFRQWUDFWRUW FRGH
LV EHLQJ GRQH LQ WKH 3HRSOH<V 5HSXEOLF R
D

EXLOW LQWR WKH FRGH DW LWV SRLQW RI RUI
E\ PDMRU JRYHUQPHQWV WKDW PD\ IRUFH VRI
ZURWH WKHLU VRIWZDUH DQG ZKHUH LW ZDV F

ORQROLWKLf 8ELTXLW\ DQG WKH ,7 9XOQHUDELO
,QIRUPDWLRQ %DVHG ,QVWLWXWLRQV

'HVSLWH WKHLU VHHPLQJ RXWZDUG GLIIHUHQF
VXEVWDQWLDO ,7 LQIUDVWUXFWXUHV ~~WRXW~~
VRIWZDUH SRZHU VXSSOLHV DQG EDFNXS V\V
VDPH W\SHV RI VRIWZDUH VXFK DV OLFURVRIW
RI VHFxULW\ PHWKRGV DSSOLDQFHV HWF &
DWWDFNHUV FDQ GHWHUPLQH YXOQHUDELOLW
DGDSW WKDW NQRZOHGJH WR EH HTXDOO\ VXF
GLWLRQDOO\ ODUJH RUJDQL]DWLRQV WHQG W
SXUHO\ RQ WKHLU VL]H DQG LQÁXHQFH 8QIRU
LQ WKH F\EHU ZRUOG EHWZHHQ WKH VL]H RI D
ULW\ 2Q WKH FRQWUDU\ D VPDOO WR PHGLXP
D PRUH GLIÁFXOW WDUJHW GXH WR LWV ODFN
OLNHOLKRRG WKDW XSGDWHV DQG SDWFKHV ZI
ODUJHU LQVWLWXWLRQV

,Q WKLV FDVH D FRQWUDVW H[LVWV EHWZH
F\EHU ZRUOG LQ VHFxULW\ WHUPV 7KHUH LV
EHWZHHQ WKH F\EHU ZRUOG DQG WKH SK\VLFD
ODUJH EDQN RU FDVK FHQWUH LV OHVV YXOQH
FRQYHQLHQFH VWRUH EHFDXVH RI LWV UHVX
GHWHUPLQHG UREEHU ZLOO EH DEOH WR GHIH
D VPDOO VDIH 7KRVH VDPH VNLOOV ZRXOG QR
DWWDFN D FDVK FHQWUH RU PDMRU EDQN ,Q W
RI DQ RUJDQL]DWLRQ DQG LWV FRPSOH[LW\ GR
IDFW WKH RSSRVLWH DSSHUV WR EH RFFXUUL

&RPSOH[LW\

/DUJH FRPSOH[V\VWHPV LQFUHDVH WKH SURED
LQWHUGHSHQGHF\ DUH NQRZQ WR EH WKHLU
SXWHU V\VWHPV SRZHU JULGV DQG PDQ\ RWKH
7KH FRQVWDQW DGGLWLRQ RI PRUH WHFKQROR

'RQ'W &DOO 8Vμ

E\ DGGLQJ FRPSOH[LW\ PRUH LPSOLFLW DVVXF

'RQ(W &DOO 8Vμ

HYLGHQFH VXJJHVWV D PFK ODWHU GDWH GXH
LQ WKH F\EHU ZRUOG DQG WKH OLPLWHG UDWH
SRXQGHG E\ FXUUHQW JRYHUQPHQW SUH RFFX

1RWHV

)RUPHU : + RIÀFLDO LQ WKH HYHQW 1RDL RHEHQZHU C
-DQXDU\ DYKOWS SEOZHW DWLRQDOGHQHVPDJD
3RVWV 3RVW DVS[",'
ODUN &OD\WRQ ',V WKH F\EHUZDUIDUH DUPV UDFH IRU

)UDQNOLQ .UDPHU ' &\EHUSRZHU DQG 1DWLRQDO 6HFXULW\ 2
6WUDWHJLF)UDPHZRUN μ LQ)UDQDHOHQSDXWDLRQDO OH
6HFXULW\ 2

.XJOHU 'HWHUUHQFH RI &\EHU \$WWDFNV μ 2

ODQJR 'HWHUUHQFH DQG (VFDODWLRQ

*RPSHUW DQG .RIIPDQQ 5DLVLQJ 2XU 6LJKWV

*RUGRQ 0 6QRZ \$VLLVWDQW 'LUHFWRU &\EHU 'LYLVL
WLRQDWLPHQRWKHQDWBELF&BPLWXBFRPPRQVULPH
DQGHUURUDVKLQJWRQ '& \$SULOKWWSDYZZDEIOHRDW
WHVWLPRQ\F\EHUVHFXULW\ UHVSROGLQJ WR WKH WКУ
DOVR WKH EULHÀQJ RI WKH 0DUFHOOD +DZNVH 'LUHFWRU
*RYHUQPHQW \$WWRUQH\ *HQHUDO<KWHSSUDPHQVSDR
'RFXPHQWV 7(/7(/ 636* :.63 BWHO BVSVBZNVSE

*RYHUQPHQW RIDQDQDGEWUHFV6LWVWYRDAWURQDORU
3URVSHURQYGDWWDZD BWDLSDEZZ \$XVOLFVDIH
SUJ QV FEU BÀ FFVV VFF HQJ SGI

\$XVWUDOLDQ * &\EHUFXULWUDWHDQEHUUD Y DY
DWKWS ZZZ DJ JRY DX 'RFXPHQWV \$' &\EHU 6HFXULW
IRU ZHEVLWH SGI

8. &DELQHW 2IÀFH &\EHU 6HFXULW\ 6WUDWHJ\

5HOLDEOH VWDWLVLVLFV DUH LPSRVVLEOH WR REWDLQ
D FHQWUDO GDWDEDVH RI VXFV LVVXHV 0RUHRYHU P
VXFV ORVVHV IRU UHSXWDWLRQDO UHVRQV \$V RQH
LV D KXJH LVVXH DQG RIWHQ LQYROYHV PHPEHUV RI D
RI WKH LQGXVWU\<V IUDXG 0RVW VHFUXULW\ SHRSOH L
FULPH DWWDFN RQ WKH EDQNLQJ LQGXVWU\ RYHU D SH

%UXFH 6FRFHUHQV H\JLWDFXU DWHWZRURNUGHZ <RUN
:LOH\ .HYLQ ' 0LWQLFN DQSRV 0DH 0VLRQRO
OLWJXPDQHPHOMFXULW\ 1HZ <RUN :LOH\)DWDORVH
6\VW\HURVXHQVWKH ZULPRUGR\$UP%ULQJRZQWKH
,QWHUQHWH 3XEOLF\$IIDLUV .HYLQ ' 76LWGLFN D
,QWUXKULFDORVURV\HKWQHSORLWDFNHQWUXDGHVHLYHUV
1HZ <RUN :LOH\ 6HH DOVR 9H\DWYDQHDQKHWDP
WLJDDVHSDWDLQKQVMSDWZZZ YHULJRQEXVLQHV FRP

'RQ(W &DOO 8Vμ

)RU D EURDGHU DQDO\VLV RI WKH VWUXFWXUBDVLSURE
'LVFRQWWRUQRQRFOHUVVWDDHL ODEOKWRSOLQZZDWHGDQD
RUJ VWDUWLQJ WKH FKURQWWSOHZZZIUHYGDUD
RUJ WKH FKURQLFOHV RI HYHUVWDWH F F

)RU D UDUH H[DPSOH RI ZKHUH D 8. FRXUW KHOG D VRI
XFW SHUIRUPDQFH VHH '+LJK &RXUW UXOHV VRIWZDU
DYDLODEOKWRSOLQZZWRXW ODZ FRP SDJH +LJK &
KWS ZZZ EYDLOO RUJ

\ ^ \ ^N ^ WW\^ \^^^NN ^NNN #`À ^ N[W A\W
Kp Lp Lp s ÑG1 s !G1 Zs §1 Ts ' BpFBp Bp Bp P pXBp Bp BpG p
VHVHVHVHVZRUXOLDELOLW\

ZZZ DUP LO DU LFO\ &

&&ODLWRQ @À` (PÀ`ÄP€P @P• @P(PÀ@P ` `

5YDLVL ¥ 0RXQ

,QWHUYLHZ ZLWK VRIWZDUH GHYHORSHU DQG PDUNHW

2Q WKHVH LQIUDVWUXFWXUH YXOQHUDELLOLWLHV VHH
3ÁHHJ\$QDO\PLQPSXVHFXULWUHDW 9XOQHUDELOIS\ &RXO
SURDRQJOHZRRG &OLIIV 1- 3UHQWLFH +DOO HV
DQG +XQWHUURWVZQHDHU6WUDWRUDWLRQDOLW\ \$PKHU
1+ %ULFN +RXVH

)RU PRUH RQ WKH LVVXH RI WKH LQWHUSOD\ EHWZHHQ
VHFXULW\ VHH &KULYWRISKOLOH7KEDU+XPDQDFNLQJ
1HZ <RUN :LOH\ DQFUREQKQVHLHLUWLNFRH\$SWLRQ
OLWQLFN \$UW RI ,QWUXVLRQ DQG 0HQQ)DWDO 6\WV

+DGQDQRFQDOLQHHLQJ 3ÁHHJ\$QDO\PLQPSXVHFXULW\
[[Y

7KH KDFNLQJ J@PI 1DWLRQDÜ €pÿ & @€ZWU€ÖEsi E@Ö

.SVZZHY`

\$[LRORJLFDO WDUJHWLQJ \$ WKHRU\ RI WDUJHY
ZRUBMLRZRURWKORDRUBHDVRQ RU WKHRU\ ,W LV
RI YDOXH³ZKDW WDUJHWV DUH UHTXLUHG WR
LV RI DWWDFNLQJ WKHP &XUUHQWO\ WKHUH
DQG WKHRU\ DYDLODEOH DERXW KRZ WR DWW
RI GHWHUUHQFH HVFDODWLRQ RU UHWDOLDWL

&\EHU H[SORLWDWLRQ 7KH SURFHVV RI UHPRY
HUV DQG QHWZRUNV ZLWKRXW DXWKRUL]DWLR
IRUP LQFOXGLQJ ÀQDQFLDO WHFKQLFDO GLSC

&\EHU DWWDFNLQJ\LRQ DOWHULQJ RU GHJUDGLQ
ZLWK D PDOLFLRXV LQWHQW

&\EHU ZDU IR JHQHUDOO\ DFFHSWHG GHÀQLW
5LFKDUG \$ &OEHUHU LQGHÀQHV LW DV 'DFWLR
VWDWH WR SHQHWUDWH DQRWKHU QDWLRQ\ V FF
RI FDXVLQJ GDPDJH RU GLVUXSWLRQ µ 'HVSLW
DUJXDEOH WKDW WKHUH KDV RQO\ EHHQ RQH F
RI ZDUIDUH DFWXDOO\ EHLQJ XVHG³WKH XVH RI
GXULQJ WKHLU SDUWLDO LQYDVLQJ RI *HRUJLI

'HWHUUHUHQHDELOLW\ WR GHPRQVUDWH WKDV
\RXU DGYHUVDU\ IURP DWWDFNLQJ DV WKH\ EH
H[SORLWDWLRQ ZLOO RXWZHLJK WKH EHQHÀW
FUHGLEOH WLPHO\ DQG SURSRUWLRQDO DV ZH
WKH\ DUH LQWHQG HG WR GHWHU 7KHUH KDV W
DFWLRQ DQG UHVSQRVH WR HOLPLQDWH WKH S
DV EHLQJ VHHQ DV FRLQFLGHQWDO E\ WKH DG

(VFDODWLRQ 7KH ZLOOLQJQHVV WR EURDGHQ
IURQWDWLRQ E\ VKLIWLQJ WKH QDWXUH RI WKH
LQWHQVLW\ RU FRVW RI WKH UHDFWLRQ



:LSLJ[)PISPVNYHWO`

*RYHUQPHQW 'RFXPHQWV

\$XVWUDOLDQ *RYHUQPHQW V D V D Q EHUUD YK V W S L O D E
ZZZ DJ JRY DX 'RFXPHQWV \$* & \EHU 6HFXULW\ 6
IRU ZHEVLWH SGI

*RYHUQPHQW R & D & D & D & D H H F X G W W U D W R H D ' 6 W U R Q O H R U H
3URVSH & D R X D G Z D W D Z D & W D L S D E Z O Z & X E O L F V D I H
SUJ QV FEU BA' FFVV VFF HQJ SGI

8QLWHG .LQJGRP & D E L H H F X G W W U D W R H D ' 6 W U R Q O H R U H
8. L O ' L J L W D L O O G / R Q G R Q 1 R Y H P E H U K W W S D Y O Z Z O F D E H
RIAFH JRY XN UHVRXUFH OLEUDU\ F \EHU V H F X U L W \ V W

8QLWHG 6WDWHV 'HSDUWPHQW X P D I G U R H Q D D O G E E K F X U L W \
5H Y L H Z + 6 5) H E U X D U \ & W D L S O D E Z O Z & K W J R Y [O L E U
TKVUBUHSRUW SGI

6HFRQGDU\ 6RXUFHV

\$QGUHV -DVRQ DQG 6WHYHUQ D V H H U H H G T D F W D L O R O V
IRU 6HFXULW\ 3UDG W K D P R Q \$ H U 8 Q J U H V V 3 X E O L V K H U V

&RQIHUHQFH % R E E S D L V & U L W L F D O & R P S R S F H O D W R I I H H I Z H Q V H
<RUN 7KH &RQIHUHQFH %RDUG

+DGQDJ\ &KULVW R P S F H O D L Q H H U K L S U W + X P D + O D F N L O H I Z <RUN
:LOH\

.UDPHU)UDQNOLQ 6WXDUW 6W DU U & D E G S E D Q H A D W H L C R V D O H
6HFXULW\ :DVKLQJWRQ '& 3RWRPDF %RRNV

ODQJR 9LQFH Q W H U U D O Q F H D O D V U R Q V G S P U L Q W K R Q R
6SD F H Q \ E H U V \$ D W H , 1 6 6 6 W U D W H J L F) R U W V 0 6 S D F H

'RQ'W &DOO 8Vμ

0LWQLFN .HYLQ ' DQG :LQOHLUMPHLPSVLRQWURGHPOQ
(OHPHQW RI 6HFXULW\ 1HZ <RUN :LOH\

BBBBBBBBB \$UWKRH ,QWKUHX5HEDQULHHK\WQGH ([SFOIRLDFWUHUV
,QWUXGHUV DQGHZFRLYHU:VLOH\

3DQ -LQWDR '6RIWZDUH 5HOLDELOLW\ μ & B\WQMSJLH
ZZZ HFH FPX HGX aNRRSPDQ GHVBV VZBUHOLDELOLW\

3ÁHHJHU &KDUOHV 3 DQG 6KDU\$QDZUPLRPSIXSÁHFU\$H\W\
7KUHDW 9XOQHUDELO\$S\$S&RQXQVCHZRHGV & OBIIV 1- 3UH

6FKQHLHU %U&HFHUBWGLHVLJLWIDEXULQWHWZRURUHQGHZ
<RUN :LOH\

(IV\[[OL (\[OVY

7RP 4XLJJLQ LV D 6HQLRU 5HVHDUFKHU DW WK
OLJHQFH DQG 6HFXULW\ 6WXGLHV DW &DUOHV
H[SHUW RQ WHUURULVP KH KDV \HDUV RI SU
RI LQWHOOLJHQFH SRVLWLRQV +H KDV ZRUNH
WKH 5R\DO &DQDGLDQ 0RXQWHG 3ROLFH WKH
8QLWHG 1DWLRQV 3URWHFWLRQ)RUFH LQ <XJR
&DQDGD :DU &ULPHV WKH ,QWHUQDWLRQDO :
PHU <XJRVODYLD 7KH +DJXH DQG WKH 3ULY\
ZDV DOVR D TXDOLÀHG DUPV FRQWURO LQVSHF
(XURSH 7UHDW\ DQG WKH 8QLHQDOVRFRPHDQV
WKH ,QYLVEOH 1DWLRQDO 6HFXULW\ ,QWHOO

Centre for International and Defence Policy
Published in association with the
School of Policy Studies

The Centre for International and Defence Policy (CIDP) at Queen's University was established in 1975 to provide a focal point for research, publication and education on Canadian foreign and defence policy, and other aspects of international relations. We support a range of activities in the field of security and defence. Through publications and events, CIDP and its Fellows contribute to public debate on foreign and defence policy, and on issues of international peace and security. The Centre's purpose is to help shape a distinctive Canadian view of the world, and of Canada's role in global affairs.

To receive a list of the Centre's publications, or to order copies, please contact

Centre for International and Defence Policy
Robert Sutherland Hall 403
Queen's University
Kingston, ON K7L 3N6
CANADA

+1 (613) 533-2381

cidp@queensu.ca
www.queensu.ca/cidp

ISSN: 1205-7525
ISBN-13: 978-1-55339-356-6



' ' R Q . W & D O O
* R Y H U Q P H Q W V & \ E H
, P S O L F D W L R Q V I R U W K H

7 R P 4 X L J J L Q

/LEUDU\ DQG \$UFKLYHV &DQDGD &DWDORJXLQJ LQ 3XEOL
4XLJJLQ 7KRPDV
'RQ<W FDOO XVµ JRYHUQPHQWV F\EHU VHFUXULW\
VHFWRU 7RP 4XLJJLQ

2FFDVLRQDO SDSHU
,QFOXGHV ELEOLRJUDSKLFDO UHIHUFHV
,6%1

&\EHUVSDFH³6HFXULW\ PHDVXUHV³*RYHUQPHQW SROLF
*RYHUQPHQW SROLF\ &RPSXWHU QHWZRUNV³6HFXULW\
1DWLRQDO VHFUXULW\ &\EHUWHUURULVP³3UHYPHQLR
&RPSXWHU QHWZRUNV³6HFXULW\ PHDVXUHV %XVLQHVV\
QHWZRUNV³6HFXULW\ PHDVXUHV , 4XHHQ<V 8QLYHUVLW\
IR,QWHUQDWLRQDO DQG 'HIHQFH 3ROLF\ ,, 7LWOH ,,,
2FFDVLRQDO SDSHU VHULHV 4XHHQ<V 8QLYHUVLW\ .LQJ
DQG 'HIHQFH 3ROLF\

4\$ \$ 4 &

< &RS\ULJKW

;HISL VM *VU[LU[Z

)RUHZRUG

Y

7KH 3UREOHPV

7KH &ULWLFDO ,VVXHV

7KH 2XWORRN

&RQFOXVLRQV

1RWHV

*ORVVDU\

6HOHFW %LEOLRJUDSK\

\$ERXW WKH \$XWKRU

YL 'RQ<W &DOO 8Vμ

2FFDVLRQDO 3DSHUV SXEOLVKHG E\ WKH &F
'HIHQFH 3ROLF\ DW 4XHHQ<V 8QLYHUVLW\ DUH
SROLF\ FRPPXQLW\ DQG WKH EURDGHU SXEOLF
SRUDU\ LVVXHV LQ LQWHUQDWLRQDO DQG GHIF

.LP 5LFKDUG 1RV
'LUHFWRU
&HQWUH IRU ,QWHUQDWLRQDO
4XHHQ<V 8QLYHU
\$SULO

'RQ(W &DOO 8Vμ

%HFDXVH RI LQIRUPDWLRQ WHFKQRORJ\ ,7
ZRUGV WKH FRPPRQDOLW\ RI V\WHPV DFURV
LQVWLWXWLRQV ZLWK VLJQLÀFDQW ,7 LQIUDV
HTXDOO\ RU LQ PDQ\ FDVHV HYHQ PRUH YXOQ
VPDOO WR PHGLXP ,7 LQIUDVWUXFWXUHV 2Q W
,7 RULHQWHG VHFXULW\ LQVWLWXWLRQV WKDV
LQ WKH ODVW ~~XWZRVW~~ WKDW WKH SHUFHSWLR
DUH LQKHUHQWO\ EHWWHU SURWHFWHG DJDLQ
3HHU WR SHHU 3 3 VKDULQJ RQ WKUHDW
PHDVXUHV LV DQG ZLOO UHPDLQ D KLJK YDOXH
IRUZDUG OHDQLQJ LQWHUQDO PRQLWRULQJ SU
LQWHOOLJHQFH FROOHFWLRQ 7KH RXWVRXUF
VHFXULW\ PRQLWRULQJ LV D KLJK ULVN RSWL

7KH 3UREOHPV

&\EHU DWWDFNV DQG F\EHU H[SORLWDWLRQ ZL
ULVN *RYHUQPHQW W\SLFDOO\ UHVSQVLEO
DVVHWV RQ WKH WHUULWRU\ RI WKH VWDWH I
GRPHVWLF LQWHUQDWLRQDO FULPLQDO DFWLY
UHTXLUHG SURWHFWLRQ

\$PRQJ WKH FULWLFDO DUHDV RI ZHDNQHV
DQG RU ODZ DQG UHJXODWLRQV DUH WKH IROC

‡ 7KH ODFN RI WKHRU\ RU SUDFWLFDO DFWLY
WDOLDWLRQ DQG RU HVFDODWLRQ FRQFHUQ
\P

GHIHQFH DJDLQVW F\EHU DWWDFNV DQG F\EH
EHHQ VORZ WR PRYH 7KH ÀUVW VLJQLÀFDQW
DQG WKR VH UHVSQRVHV WHQGHG WR IRFXV
V\VVWHPV

‡ 7KH VLJQLÀFDQW JDS WKDW H[LVWV EHWZHH
DQG WKH DELOLW\ RI PRVW :HVWHUQ JRYHUQ
FKDQJLQJ UHTXLUHPHQWV QHHGHG WR DGGU

‡ 7KH OLPLWHG UDQJH RI LQWHUQDWLRQDO O
VKDULQJ FDSDELOLWLHV :KLOH LQWHOOLJH
EH LQFUHDVLQJ WKH VKRUW WR PHGLXP WH
WR SHHU VKDULQJ

‡ 7KH RXWVRXUFLQJ RI D YDULHW\ RI ,7 FDS
PDLQV RQH RI WKH NH\ DUHDV IRU FUHDWLQ
V\VVWHPV WR DWWDFNV DQG H[SORLWDWLRQ

‡ 7KH PRQROLWKLXELTXLW\ RI ,7 HTXLSPHQW
ODUJH ,7 EDVHG RUJDQL]DWLRQV

‡ 7KH PLVWDNHQ EXW QRQHWKH OHVV SHUVLV
HUQPHQW WKDW D WHFKQRORJLFDV VROXW
VHFXULW\

7KH &ULWLFDO ,VVXHV

7KHUH DUH D QXPEHU RI FULWLFDO LVVXHV W
PHQWV DQG WKH SULYDWH VHFWRU³QHHG WR D

'HWHUUHQFH 7KH RU\

,Q JHQHUDO WHUPV :HVWHUQ JRYHUQPHQWV K
WKH FRQFHSWV RI GHWHUUHQFH HVFDODWLR
F\EHU DFWLYLW\ RULJLQDWHV LQVLELW\ RHEXDW
F\EHU H[SORLWDWLRQ DQG F\EHU DWWDFNV ZL
UHDVRQ IRU WKLV LV WKDW QR LQWHUQDWLRQ
DQG WKXV WKH 'UXOHV RI WKH URDGµ DUH RQ
GLVFXVVLQJ EHWZHHQ WKH PDMRU VWDWHV
WKH 5XVVLDQ)HGHUWLRQ DQG WKH 3HRSOH
EHHQ SURSRVHG QR PHHWLQJV KDYH EHHQ V

'RQ(W &DOO 8Vμ

,Q WKH PHDQZKLOH KRZHYHU F\EHU YXOQH
F\EHU DWWDFN WRROV DQG PHWKRGRORJLHV D
WHFKQLFDO FDSDFLW\ RI PDOLFMRXVHDFXORWVY
VWDWHV DQG ODUJH WUDQVQDWLRQDO JURXSV
LPSXQLW\ JLYHQ WKH ODFN RI LQWHUQDWLRQ
VWLWXWHV D SURSHU VHULHV RI UHVSROVHV

'XULQJ WKH &ROG :DU GHWHUUHQFH ZDV ZHO
\$ 'ODGGHU RI HVFDODWLRQμ UDQJHG IURP FRO
FDO FKHPLFDO DQG ÀQDOO\ QXFOHDU UHVSRO
XQGHUVWRRG E\ ERWK RI WKH VXSHUSRZHUV D
QRQ VWDWH7 DFWHUVXOHVμ ZHUH LQLWLDOO\ X
WKH WKUHH PDLQ GRPDLQV RI FRQÁLFW ODQ
VKDUHG IUDPHZRUN H[LVWHG IRU XQGHUVWDQ
WLRQ RU FRQÁLFW PLJKW GHYHORS 7KHVH UX
H[WHQG HG LQWR RXWHU VSDFH DV LW HPHUJHO

/LN@ ðADWLR !P0I•°€0 @ p 0•) Àã4•) C4•© Àã4 E 0• Qd° €
`°@P€p0IUDhð

DQG LPPLJUDWLRQ LVVXHV DQG DKHDG RI HQV
7KH FRPSDUDEOH GRFXPHQW IURP 3XEOLF 6DI
WKDW F\EHU LVVXHV DUH D 'FRUQHUVWRQHμ R
LQ DFWXDO SULRULW\ VHWWLQJ R 7KH \$XPSDULC
JRYHUQPSHQWRV KDYH D VWURQJHU LQWHUHVW
VHFXULW\ DV D 'WRS WLHU QDWLRQDO VHFXULV

'RQ(W &DOO 8Vμ

LQVLGHU ~~DKWVLSURE~~EOHP LV EHLQJ LQFUHDVLQ
GH OHJLWLPL]DWLRQ RI WKH VWDWH DQG LWV
LV EHLQJ FRPSRXQGHG E\ WKH FXUUHQW HFRQ
VSRQVRUHG DXVWHULW\ PHDVXUHV DQG WKH
WR GHDO ZLWK HPHUJLQJ ~~VPRXUWULFOVSDREO~~
H[SHULHQFLQJ D SDUWLFXODUO\ GLIÀFXOW VHV
GHPRFUDFLHV KDYH GHYHORSHG LQFUHDVLQJ
GHPRFUDWLF SURFHVVHV +RZHYHU WKH DELO
FRPSOH[LWLHV DQG WKH DWWHQGDQW SUREO
WLP\$V D UHVXOW LQVLGHU WKUHDWV DUH LG
WKHVH VRUWV RI SUREOHPV ZLOO EH GLIÀFXO

6RIWZDUH 0DNHUV

:LWK D IHZ QRWDEOH UH~~FW~~QDW~~HS~~ERSWQRGLÀFX
ZDUH PDQXIDFWXUHUV IRU VHFUXLW\ RU SHUIR
:LWKRXW WKLV DELOLW\ VRIWZDUH PDQXIDFW
DV DQ DIWHUWKRXJKW DQG RQO\ UHDFW ZLWK
DIWHU WKH IDFW DFWLYLWLHV 7KH\ DOVR RZ
VHOO 'VROXWLRQVμ WR WKHLU RZQ SUREOHPV
GRHV QRW DSSHDU WR EH LPPLQHQW LQ (XURS
7KH TXDOLW\ RI WKH VRIWZDUH LV HTXDOO
GHIHQVLYH PHDVXUHV SXW DURXQG QHWZRUN
DV WKH TXDOLW\ OHYHOV DSSOLHG WR DLUFU
LPPXQLW\ WR DWWDFNV EDV~~PH~~GFROWWVVLQORZ
VRIWZDUH VWDQGDUGV DUH JHQHUDOO\ DSSOL
VR IDLOXUHV DQG YXOQHUDELOLW\ WR DWWDF
IDFWXUHUV JHQHUDOO\ RQO\ VHULRXVO\ FRQV
DQG WKHQ DSSO\ D 'SDWFKμ PHQWDOLW\ WR V
LQG XVWU\ DQG WKH FRPSOH[LW\ RI WKH SURE
:HVWHUQ JRYHUQPHQW ZLOO DPHQG OHJLVODW
WKDW ZLOO HQFRXUDJH VRIWZDUH PDQXIDFWX
SURGXFW E\ H[SRVLQJ WKHP WR JUHDWHU OHJ

\$PHULFDQ /HDGHUVKLS

'HVSLWH SUHVXUH IURP ERWK WKH SULYDWH
WKH 8QLWHG 6WDWHV JRYHUQPHQW XQGHUWRP

'1RQ(W &DOO 8Vμ

KDV QRW EHHQ PDGH FOH DU DQG WKH OHJLVO
RYHU FRPSHWLQJ OHJLVODWLRQ PD\ HYHQWXD

*DSV EHWZHHQ 5HDOLW\ DQG *RYHUQPHQW .QRZO

*RYHUQPHQW EDVHG DQDO\VLV WHQGV WR OI
NQRZOHGJH FUHDWLRQ HIIRUWV FRQFHUQLQJ F
SUHVFULSWLRQV FRQWDLQH LQ D VHULHV RI
ZHUH EDVHG RQ DQG *LYHODWLDWV SURE
WKH F\EHU ZRUG WHQG WR HYROYH LQ SHUL
HUQPHQW UHVSQVH EDVHG LQ DQ DVVHVPHQ
WR EH HIIHFWLYH

,QWHUQDWLRQDO /DZ (QIRUFPHQW DQG ,QWHOO

'HVSLWH SXEOLF FRPPHQWV WR WKH FRQWUDU
LQWHUQDWLRQDO VKDULQJ DQG FRRSHUDWLRQ
JDWLRQV LV QRW HQFRXUDJLQJ 2QH SDUWLFX
EHWZHHQ QDWLRQDO JRYHUQPHQW DJHQFLHV
IRUPHU :KLWH +RXVH 'LUHFWRU RI &\EHU ,QIUD
-DQXDU\ ' *RYHUQPHQW RQO\ LQKDOHV LW
WKH LQIRUPDWLRQ EXW LW ZLOO ÀQG DQ\ H[F
,QWHUQDWLRQDOO\ WKH VLWXDWLRQ LV QR
GLVSXWHV FRPSOH\ OHJDO UHTXLUHPHQWV D
SDUW RI VRPH PDMRU JRYHUQPHQWV KDYH JU
LQYHVWLJDWLRQV \$V ZLWK GHWHUUHQFH DQG
DWH À[HV LQ VLJKW DQG QR UHDVRQ WR EH RS
À[HG LQ WKH QH DU IXWXUH

2XWVRXUFLQJ

:KR ZULWHV \RXU FRGH WKDW LV LQ \RXU VHF
NQRZ DERXW LW" '1RW PFKμ LV WKH OLNHOLHY
LQFOXGLQJ VRIWZDUH VHF\ULW\ FRPSDQLHV D
WR VXE DQG WR VXE YXIEFRQWUDFWRUV FRGH
LV EHLQJ GRQH LQ WKH 3HRSOH\ V 5HSXEOLF R
HYHQ /LE\ D)RU WKH HQG XVHU WKHUH LV QR
RI WKH FRGH DQG QR ZD\ RI NQRZLQJ ZKHWK

'RQ'W &DOO 8Vμ

PRGXODUL]HG VRIWZDUH IRU KDFNLQJ 3RRUO\
]HUR GD\ YXOQHUDELLOLWLHV DVVLVWV WKHP
&RPSOH[LW\ LV D VHULRXV DGYHUVDU\ E\ LW\
GHQFH LW PD\ SURYH WR EH WKH \$FKLOOHV +I
WUHQG LV PRYLQJ XV WRZDUGV V\ VWHPV ZKLFK
RI IDLOXUH μ 7KLV JUHDWO\ HQKDQFHV WKH PR
2Q D PRUH SRVLWLYH IURQW KRZHYHU WKH
OLNH PLQGHG LQVWLWXWLRQV LV JURZLQJ 7K
UHVSRQVH WR RQJRLQJ DQG RU SRWHQWLDO S
GDWH VKRZV UHVSRQVH WLPHV LQ D 3 3 VLWX
GD\ V RU ZHHNV ZKHQ GRQH WKURXJK RIÀFLDO

&RQFOXVLRQV

/DUJH ÀQDQFLDO LQVWLWXWLRQV DQG FHQWUD
VKRUW WR PHGLXP WHUP JRYHUQPHQW HIIRUV
IURP IRUHLJQ WKUHDWV ZLOO EH PRGHVW *R
IUDPHZRUN IRU WKH QHFHVVDU\ F\EHUVSDFH G
SDELOLWLHV DQG WKH 'UXOHV RI WKH URDGμ I
RI EHKDYLRXU KDYH QRW EHHQ GHYHORSHG 7K
DFURVV VWDWH ERUGHUV LV OLPLWHG DQG WK
DFWRUV DQG FULPLQDOV LV PLQLPDOO\ HIIHFV
,QVWLWXWLRQV QHHGLQJ³RU ZDQWLQJ³DQ HI
DWDFNV DQG H[SORLWDWLRQV ZLOO KDYH WR
FDSDELOLWLHV ZKLOH GHYHORSQJ WKHLU RZQ
WR VXSSRUW WKHVH RSHUDWLRQV 7KRVH LQV
GHIHQVLYH ,7 ZRUNHUV ZLWK D ÁH[LEOH ZRUN
WKLQNLQJ DQG FUHDWLYLW\ DUH DFWXDOO\ DO

'RQ<W &DOO 8Vμ

HYLGHQFH VXJJHVWV D PXFK ODWHU GDWH GXH
LQ WKH F\EHU ZRUOG DQG WKH OLPLWHG UDWH
SRXQGHG E\ FXUUHQW JRYHUQPHQW SUH RFFX

1RWHV

)RUPHU : + RIÀFLDO LQ WKH HYHQW 1RDL RHEHQZHU
-DQXDU\ DYKWDSEOZDZDQDWLRQDOGHQHHPDJ
3RVWV 3RVW DVS[",'

ODUN &OD\WRQ ',V WKH F\EHUZDUIDUH DUPV UDFH IRU
WKDW &KULWFLDORRQLWRU DQXDU\ DYKWDSEOZDZDQDWLRQDOGHQHHPDJ
FVPRQLWRU FRP 86\$ ',V WKH F\EHUZDUIDUH DU
RI ZRUOG H[SHUWV VDIV LW LV RQDO&€`QDO

5LFKDUG UJ R@QDG 'HWHUHQFH RF & \EHU \$WWDFNV μ
/DUU\ :HQW & HGVSRZHU WLBXUW\ :DVKLOJWRQ '&

DQG 6HFXUDQGD\$WRQDQDWRD@ðERQDOVHFWRQDO

'RQ<W &DOO 8Vμ

)UDQNOLQ .UDPHU `&\EHUSRZHU DQG 1DWLRQDO 6HF XU
6WUDWHJLF)UDPHZRUN μ LQ)UDQNHQS ~~6WUDWRQD~~ OH
6HF XU ~~ZLWPH~~ À ~~WZ~~ 6W ~~OH~~ D EN

,QWHUYLHZ ZLWK VRIWZDUH GHYHORSHU DQG PDUNHW
2Q WKHVH LQIUDVWUXFWXUH YXOQHUDELLOLWLHV VHH
3ÁHHJ\$UDO\RLQPSXVHFUX\$7WUHDW 9XOQHUDELOL\$S\ &RXO
SURDFQJOHZRRG &OLIIV 1- 3UHQWLFH +DOO HV
DQG +XQWH%UR3VZQHQHU6WUDWRUDWLR&RDXULW\ \$PKHU
1+ %ULFN +RXVH

)RU PRUH RQ WKH LVVXH RI WKH LQWHUSOD\ EHWZHHQ
VHFUXULW\ VHH &KULVWRISXOHLQ#7KEDUW+XPD-QDFNLQJ
1HZ <RUN :LOH\ DQFUREQKQVHLOL\$ULF#HSHWLRQ
OLWQLFN \$UW RI ,QWUXVLRQ DQG 0HQQ)DWDO 6\WV

+DGGD&RF(QOLQHHULQJ 3ÁHHJ\$QDOQLSÁ\$IXVHFU
[[Y

7KH KDFNLQJ RI 675\$7)25 LQ 'HFHPEHU FDXVHG VL
QXPEHU RI LQVWLWXWLRQV ZKLFK ZHUH FXVWRPHUV I
3 3 VKDULQJ UHVXOWHG LQ LQIRUPDWLRQ EHLQJ SDVV
WKH VDPH GD\ ZKLOH WKH ÁUVW RIÁFLDO QRWLÁFDW
SUREOHP GLG QRW RFFXU IRU ÀYH GD\V ORQJ DIWHU
DOUHDG\ EHHQ WDNHQ 2WKHU JRYHUQPHQWV UHVSRO

.SVZZHY`

\$[LRORJLFDO WDUJHWLQJ \$ WKHRU\ RI WDUJH
ZRU~~B~~MLRZRURWKORD~~B~~UHDVRQ RU WKHRU\ ,W LV
RI YDOXH³ZKDW WDUJHWV DUH UHTXLUHG WR
LV RI DWWDFNLQJ WKHP &XUUHQWO\ WKHUH
DQG WKHRU\ DYDLODEOH DERXW KRZ WR DWW
RI GHWHUUHQFH HVFDODWLRQ RU UHWDOLDWI

&\EHU H[SORLWDWLRQ 7KH SURFHVV RI UHPRY
HUV DQG QHWZRUNV ZLWKRXW DXWKRUL]DWLR
IRUP LQFOXGLQJ ÀQDQFLDO WHFKQLFDO GLSC

&\EHU DWWDFNLQJ\LRQJ DOWHULQJ RU GHJUDGL
ZLWK D PDOLFLRXV LQWHQW

&\EHU ZDU 1R JHQHUDOO\ DFFHSWHG GHÀQLV
5LFKDUG \$ &OEHUHUH LQGHÀQHV LW DV 'DFWLR
VWDWH WR SHQHWUDWH DQRWKHU QDWLRQ\ V F
RI FDXVLQJ GDPDJH RU GLVUXSWLRQ µ 'HVSLW
DUJXDEOH WKDW WKHUH KDV RQO\ EHHQ RQH F
RI ZDUIDUH DFWXDOO\ EHLQJ XVHG³WKH XVH RI
GXULQJ WKHLU SDUWLDO LQYDVLQJ RI *HRUJL

'HWHUUH~~7KH~~HDELOLW\ WR GHPRQVUDWH WKDV
\RXU DGYHUVDU\ IURP DWWDFNLQJ DV WKH\ EH
H[SORLWDWLRQ ZLOO RXWZHLJK WKH EHQHÀW
FUHGLEOH WLPHO\ DQG SURSRUWLRQDO DV ZH
WKH\ DUH LQWHQG HG WR GHWHU 7KHUH KDV W
DFWLRQ DQG UHVSQRVH WR HOLPLQDWH WKH S
DV EHLQJ VHHQ DV FRLQLGHQWDO E\ WKH DG

(VFDODWLRQ 7KH ZLOOLQJQHVV WR EURDGHQ
IURQWDWLRQ E\ VKLIWLQJ WKH QDWXUH RI WKH
LQWHQVLW\ RU FRVW RI WKH UHDFWLRQ

:LSLJ[)PISPVNYHWO`

*RYHUQPHQW 'RFXPHQWV

\$XVWUDOLDQ *RYHUQPHQW\

'RQ<W &DOO 8Vμ

0LWQLFN .HYLQ ' DQG :L7OKSLUMPHFLPSVQLRQW UVR G-X
(OHPHQW RI 6HFXULW\ 1HZ <RUN :LOH\

BBBBBBBBB \$UWYKH ,Q7WKUX5YH B/Q U/LHK/WQGH ([SFCRLDFNHUV
,QWUXGHUV DQG GHEF4RLYNHU:V.OH\

3DQ -LQWDR '6RIWZDUH 5HOLDELOLW\ μ & 8WQMSJLH
ZZZ HFH FPX HGX aNRRSPDQ GHVBV VZBUHOLDELOLW

3ÁHHJHU &KDUOHV 3 DQG 6KDU\$QDZU BLDPSIXSÁHFU USLW\
7KUHDW 9XOQHUDELO\$V\$ &RQX QWCHLZPHRGV &OHIV 1- 3UH

6FKQHLHU %U6HFFUBWGLHVLJLV BDEX ULDW HWZR URUHQGHZ
<RUN :LOH\

(IV\[[OL (\[OVY

7RP 4XLJJLQ LV D 6HQLRU 5HVHDUFKHU DW WI
OLJHQFH DQG 6HFXULW\ 6WXGLHV DW &DUOHV
H[SHUW RQ WHUURULVP KH KDV \HDUV RI SU
RI LQWHOOLJHQFH SRVLWLRQV +H KDV ZRUNH
WKH 5R\DO &DQDGLDQ 0RXQWHG 3ROLFH WKH
8QLWHG 1DWLRQV 3URWHFWLRQ)RUFH LQ <XJR
&DQDGD :DU &ULPHV WKH ,QWHUQDWLRQDO :
PHU <XJRVODYLD 7KH +DJXH DQG WKH 3ULY\
ZDV DOVR D TXDOLÀHG DUPV FRQWURO LQVSHF
(XURSH 7UHDW\ DQG WKH 9LHQDOVR FVPHDQWK
WKH ,QYLVEOH 1DWLRQDO 6HFXULW\ ,QWHOOL

Centre for International and Defence Policy
Published in association with the