

, QWHUQDWLRQDO 6XPPHU
\$QDO\ \$DVHEUD DQG &RPSXW

6XPPDU\ 5HSRUW

&KLQD 1DQMLQJ

\$XJ ± 6HS

& R Q W H Q W V

&RXUVH 6HOHFWHG 7RSLFV LQ 0RGHUQ 0DWKHPDWLFW

&RXUVH 6HOHFWHG 7RSLFV LQ \$GYDQFHG \$OJHEUD

&RXUVH 6HOHFWHG 7RSLFV LQ \$GYDQFHG \$OJHEUD

6WXGHQW 1DPH /LVW

3 5 (5 (4 8 , 6 , 7 (6

& D O F X O X V

& 2 8 5 6 (2 % - (& 7 , 9 (6

6 W X G H Q W V Z L O O

O H D U Q K R Z W R I B H P Y D U L D W W L D Q Q D O Q S U R E O H P V

E H D E O H W R D S I O 9 D U L H D W D Q Q X O P R] D W L D Q Q H S U R R E P Q I Q P V

S K \ V L F V D Q G P H F K D Q L F V

& / \$ 6 6 6 & + (' 8 / (

' D \ & R Q W H Q W V

\$ X J , Q W U R G X F W L R Q) X Q F W L R Q D O G H U L D Y P S W L H M H (X O H U
5 H Y L V L R Q

\$ X J 7 K H I X Q G D P H Q W D O / H P P D R I & D O F X O X V H R I 9 D U L D W
H T X D W L R Q) L U V W , Q W H J U D O V R I W L P S R X W B Q W D J U D
S R L Q W V ([D P S O H V

\$ X J 7 K H % U D F K L V W R F K U R Q H 0 D W K H P D V I P S O O H V R U P X O D
) H U P D W 3 U L Q F L S O H

\$ X J 7 K H / D Z R I 5 H I O H F W L R Q / D Z R I 5 H I U D F W L R Q 6 G
3 U L Q F L S O H D Q G W K H & D O F X O X V R I 9 D U L D W L R Q V

6 H S 6 H Y H U D O G H S H Q G H Q W Y D U L D E O H V B W K H U G H U L
F R Q G L W L R Q V X Q G H W H U P L Q H G H Q G S R L Q W V ([D P S O

6 H S & D O F X O D W L Q J W K H V H F R Q G Y D U L D W L R Q / H J H Q G U H

6 H S , Q W H J U D O F R Q V W U D L Q W V J H Q H U D O W K H R U \ ([D P S

6 H S ([D P L Q D W L R Q

) ((' % \$ & .) 5 2 0 6 7 8 ' (1 7 6

& 2 0 0 (1 7

6 R S K L D

& 2 0 0 (1 7

,

6 R I \ D

(X O H U / D J U D Q J H (T X D W L R Q

6 R I \ D

6 R I \ D

“

”

& 2 0 0 (1 7

o³o³o³o³

3 5 (5 (4 8 , 6 , 7 (6

2 Q O \ H O H P H Q W D U \ H N D O R Z O J H G E U D R I V O D Q V X P H G

& 2 8 5 6 (2 % - (& 7 , 9 (6

\$ I W H U W K L V F R X U V H V W X G H Q W V V K R X O G

- E H I D P L O L D U Z L W G J M K R I E V D K H F W K G R Z O R Y H U Q H V D Q G L S R V V L E O H D S S O L F D W L R Q V
- E H D E O H W R I R O G R Z O F H U W D L Q S P R V H U B P W K L V I L H O G

& / \$ 6 6 6 & + (' 8 / (

'D\	&RQWHQWV
\$XJXVW	,QWURGXFWRQ 3UHOLPLQDULHV YHFWRU VSDFHV OLQH DU WUDQ UHSUHVHQWDWLR]DWLRKOOLGDESRVWRWVLDQG SUP DGMRLQWV
\$XJXVW	'LIIHUHQW FODVVHV RI JHQHUDOL]QYGHUQYHUVHV DQG WKHLU SURSHUWLHV ([LVWHUQFHVDQG FRQVW ([LVWHUQFH DQG FRQVWUXFWLRQ RI ^ ± ^ '±LQYHUVHV 'LVFXVVLRQV DQG TXL]
\$XJXVW	*HQHUDO GLVFXVVLRQ DQG SUHVHQWDWLRQ
\$XJXVW	([SOLFLW IRUPXOBVRUQRUVH3RQVWUXFWLRQ ^ ±LQYHUVHV RI S'UMMEVLEHGRUDQMDQGL]HG LQY WKHLU GLIIHUHQW FKDUDFWHUL]DWLRQV 'LVFXVVLRQV DQG TXL]
6HSWHPEHU	HQHUDO GLVFXVVLRQ DQG SUHVHQWDWLRQ
6HSWHP	7KH %RWW±'XIIHQ LQYHUVH \$Q DSSOHLFVDRVLRQ RI HOHFWULFDO QHWZRUV 6SHFWUDO *HQHUDO, SUHVHQWDWLRQ RI D QRQ PDWUL] 6SHFWUDO LQYHUVH RI D GLDJRQDOL]DE
6HSWHPEHU	HQHUDO GLVFXVVLRQ DQG SUHVHQWDWLRQ
6HSWHPEHU	7KH JURXS LQYHUVH 6SHFWUDO SUHVHQWDWLRQ LQYHUVH 'LVFXVVLRQV

“ ”

Jordan

& 200 (17

,Q WKL V ZRUN ZH KDYH HOXFLGDMPHSGD WFKDHW S B Q R W R I O V
FRQFH SW RI WKH JHQHUDOLJHG LQWKHUVH R ZULW B HDQ WFSV
SVHXGRLQYHUVH 7 K D I R L X Q B W L R F D U R H I X T O S H U R X S V H U L Q M H M L Q D V
GHHS VHDWHG UHODWLRQV ZLWK Q R V Q K O P D V S D E H V S O F H
PDQDJHG WR VKHG OLJKW RQ WKH U R K J H U M Q M F R E Q L F F
OLQH DU DOJHEUD WKHRU \

ORUHRYHU ZH LQWURGXFHG D VHU GHV LRQ HDW L W I Q Q J L B
XQLTXH IDFHW RI WKH JHQHUDOLJHG X Q Q M H U D G W K X K
XQGHUVWDQGLQJ R M W K L K H R X E I M F O B W H R Q O H G V H P R R Q M W
UREXVWQHVV VXUURXQGLQJ WKH O R S D Y B H V K U R Z I B \ S I R H U
QXPHURXV SUDFW ISDDUOV IDFSXODLUF O W L B Q W R O P Y L Q V K O R O J H O U
OHDVW VTXDUHV PHWKR G

\$V ZH GHOYH GHHSU LQWR WKH U S D O S D R E O O L F Q H D D U
WKDW WKH JHQHUDOLJHG LQYHUVH I I Q D Q G H P B V H X G S H L Q Y H
VWDQGV DV D FRIUL Q O G V W R Q P X O D O K B E H W R I G Q D Y W X V E W L
WRROV WKDW FDQ EH HPSOR \ H G W R I U D F G W H K H V V L P Z S G H H \
WKH FRPSOH[IRU J L O X W S L R V Q K Z V W K D W B Q G H E I R W F K H O M J D Q

,Q IXWXUH HGGHDYRUV LW ZRXOG VEKH EQDHO IFFHLD O
EHKDYLRUV RI WKH JHQHUDOLJHG L Q M H W L R H Q V Q D G G I I E H
LQWHUDFWLRQV ZLWK RWKHU OL E R I D W U D Q J H E H U D S U R R S F H U
DQ G I R U J L Q J I U H Q K W S K H U V I S F K W I D S H M E U D \ W K O R Q H D U D

& 2 0 0 (1 7

) ((' % \$ & .) 5 2 0 7 (\$ & + (5 6

& 2 8 5 6 (6 (/ (& 7 (' 7 2 3 , & 6 , 1) 5 2 1 7 , (5 2) €
& 2 0 3 8 7 \$ 7 , 2 1

+RXUV &UHGLW KRXUV \$XJXVW 6HSWHPEHU
ORQ ± 7KXUV ±
2QOLQH 3ODWIRUR 7HQFHQW 44HWLQJ

'HVFULSWLRQ 7KH PDLQ SXUSRVH DQG FKDUDFWHUL
SURJUDP LV WR EDWLURGXH FVWV DQG FOD
DOJRULWKPV IRU KLJK GLPHQVLRQDO S
VFLHQFH DQG HQJLQHULQJ

7KH WRSLFV LQFOXGHV QXPULFDO
DSSUR[LPDWLRQ LQ KLJK GLPHQVLRQV
UHGXFWRQ PHWKRGV SUREDEO\ DSS
DQDO\VLV UDQGRPL]HG DOJRULWKPV \$
GLPHQVLRQDO HOOLSWLF SUREOHPV ZLOO

,QVWUXFWRU \$VVRFLDWH 3URI =KRQJTLDDQJ =KDQJ
'HSDUWPHQW RI ODWKHPDWLFDO 6FLHQFH
3RO\WHFKQLF ,QVWUXFWRU #ZSL HGX
+RPHS ~~KM~~WSV ZZZ ZSL HGX SHRSOH IDF

=KRQJTLDDQJ =KDQJ

3URIHVVURU *HRUJH (P
.DUQLDGDNLPHULFDO PHWKRGV IRU VWRP
\$VVRFLDWH 3URI GLPHQVLRQDO HTXDWLRQV ZLWK ZKLWH
=KRQJTLDDQJ =KDQJ
=KRQJTLDDQJ =KDQJ UHFHLYHG WKH 3K
6KDQJKDL 8QLYHUVLW\ ODWKHPDWLFV &
3K ' GHJUHH IZQ P QWKH VWRW\ \$SSOLHG
ODWKHPDWLFV 86\$FXQ UHQW+H IDQ \$VVRFL
3URIHVVURU RI WKH \$0 \$7&,(01\$ (DW WKH
:RUFHVWHU 3RO\WHFKQLF ,QVWLWXWH 86

6 HS +LJK GLPHQVLR QD R Q S, \$, UR [LPH Q VLR Q UHGXFV
o! o! PHWKRGV

6 HS 1XPHULFDO VWRW KDO VHTFX QWLRQ HQG VWRFK
o! o! DSSUR[LPDWLRQ

6 HS \$SSOLF DWLRQV WRS K UJKL QOPGLQ VLR QD W LDO F
o! o!

) ((' % \$ & .) 5 2 0 6 7 8 ' (1 7 6

& 2 0 0 (1 7

. H U Q 6 9 0

0 R Q W H & D U O R

& 2 0 0 (1 7

& 2 0 0 (1 7

