

0HUULPDFN 5LYHU :DWHU 4XDOLW\

<RXU 1DPHV

|                         | 7HVW /RFDWLRQ  |             | 7HVW /RFDWLRQ |                |             |   |
|-------------------------|----------------|-------------|---------------|----------------|-------------|---|
| 7HVW                    | 5HVXOW +HDOWK\ | + 8QKHDOWK\ | 8             | 5HVXOW +HDOWK\ | + 8QKHDOWK\ | 8 |
| \$LU 7HPSHUDWXUH        |                |             |               |                |             |   |
| :DWHU 7HPSHUDWXUH       |                |             |               |                |             |   |
| 1LWUDWHV                |                |             |               |                |             |   |
| S+                      |                |             |               |                |             |   |
| 'LVVROYHG 2[\JHQ        |                |             |               |                |             |   |
| 7RWDO 'LVVROYHG 6RO LGV |                | 7'6         |               |                |             |   |
| 7XUELGLW\               |                |             |               |                |             |   |

:KDW GRHV WKH GDWD WHOO XV DERXW WKH KH

%RRWW &R'WWRQ 0LOOV 0XVHP  
 -RKQ 6WUHHW /RZHOO 0\$  
 ZZZ XPO HGX WVRQJDV



\$Q HGXFDWLRQ SDUWQHUVKLS R  
 8QLYHUVLW\ RI 0DVV\ XVHWW  
 /RZHOO &ROOHJH R\ 0XFDWLRQ  
 WKH 1DWLRQDO 3DUN 6HUYLFH D  
 /RZHOO 1DWLRQDO +LVWRULFDQ



:KDW GR \RXUPHHDVXOWV

|             |                                          |
|-------------|------------------------------------------|
| ,I \RXVXUHW | 7KH ULYHU LV «                           |
| SSP         | XQH DOWRKH HQRXJK F<br>VXSSRUW OLII      |
| SSP         | XQH DOWRKH \ D IHZ IL<br>DTXDWLF LQVHFWV |
| SSP         | KHDOWK\                                  |
| SSP RU PF   | KHDOWKSSRUWV JU<br>DFWLYLW\              |
| SSP RU P    | KHDOWKSSRUWV QWE X<br>SRSXODWLRQV        |

:KDW FDIQFDW WKH DFLRXQWYRHHIGGR[\J  
LQ D ULYHU

ULYHU VZDIDMMZDUPHU WKDQ QRUPDO  
VXUIDFHUZORMHUURP IDUPV KRPHV L  
ZDVWH DQG VHZDJH  
D ULYHU ZLWK D ORZ IORZ UDWH DQ  
WKH DU

Uã#•Ð W0U D W J W H V W W X E H

1 L W U D W H

) L O O W K H W H V W W X Z H D U Z H W K P / R I

+ R O E B W W O H X S V L G G H G G R Z G O M B S Q W K D I W H  
W X E H

& D S W K H W H V J M Q W X O E H W D X Q U G L W R Y H U U  
P L [ L W

6 K D N E R I W W O H

+ R O E B W W O H X S V L G G H G G R Z G O M B S Q W K D I W  
W X E H

& D S W K H W H V J M Q W X O E H W X U Q L W R Y H U U  
Eã#•Ð 0 0 @ p , Q L Ô Uã#•Ð À FéÀ y P 5

: D L W W P K L Q H X H W H V

5 H D G W K H W H V W U H V X O W V E \ F R P S D U I  
V R O X W L R Q W R W K H Q L W U D W H F R O R U P  
L Q G L F D W H V W K H D P R X Q W R I Q L W U D W H

:KDW GR \RXU UHVXOWV PHDQ

|               |              |
|---------------|--------------|
| ,I \RXU UHVXC | 7KH ULYHU LY |
| SSP           | KHDOWK\      |
| PRUH WSDQ     | XQKHDOWK\    |

:KDW FDQ DIIHFW QWKHULOWKINOU RYHU

# S +

) L O O W M M W E H Z L W K U L Y H U R Z D W H U I U R P W  
E X F N H W

+ R O G W P H O O E Z R W W M L G H X S D R Z G G  
G U R S W R H O L R X I R G U W H V W W X E H

3 X W V D S H Q F W K H W W W X H U O W W K W E H R Y H U  
U H S H D W R G P L L W

& R P S B W K H F R I O W H P S O H L Q W K H R W H K H W  
S + F R O R U F D U G W P H W F R L Q H G L F D W H V W  
Z D W S H U F R U G W K H D S G D R D V K H H W

3 R X U U R L X Y H U L Z O W R H U W K Z H S O D W W U F E R W W

7 X U Q W K L V V K H H W R Y H U W R D Q H H Z K D W

: K D W G R X U U H R X D Q V

, I \ R X U U H R X C

7 K H U L Y H U

# 7 H P S H U D W X U H

, I \ R X D U H R X W G K R G J H V G I L Q G D D R X W R I  
V X Q O L J K W

\* H Q W O \ V Z L K U O J P R K P H R X H U V I D Q S I O W I H R U  
W Z R P L Q X W H V

. H H S W K H U P R P W W H U Z D O G H W H D G W K H  
W H P S H U D W X U H

5 H F R U G \ R X U U H V X O W V

7 X U Q W K L V V K V H H K P R W H B X W R U H V X O W V P



:KDW GR \RXU UHVXOWV PHDO

7LPH RHD

**TSONGAS**  
**INDUS**

Boott Cotton Mills Museum  
John Street Lowell, MA  
[www.uml.edu/tsongas](http://www.uml.edu/tsongas)  
978.679.5000

An education partnership of the  
University of Massachusetts  
Lowell College of Education  
UMASS Lowell  
the National Park Service



:KDW GR \RXU UHVXOWV PHD

|                |              |
|----------------|--------------|
| ,I \RXU ULHWXC | 7KH ULYHU LV |
| ± SSP          | KHDOWK\      |
| PRUH WKBP      | XQKHDOWK\    |

:KDW DQ DIIHFW WKH OHYHOV  
GLVVROYHG VRO LGV LQ D UL

x QDWXURORIRORFNVDQGVRLO  
x FLWLHV DQG WRZQW BQWLQRDGV LQ  
x IHUWLOLJHUV VRUGVURUDQPSOH Q  
x VWRZUPWHU DQQRDFLG UDLQ

# 7XU E L G L W \

0DNH VXUH WKH URSHE ~~DDVFNDF~~ ~~Q~~ ~~B~~ GZ ~~KLRW~~  
6HFFKLL ~~GLV~~ ~~IN~~ FXUHG ZLWK D FDUDELQH  
ERDW

6ORZO\ ORZHU WKH 6HFFKL GLVN LQW

6WRS ORZHULQJ WKH GLVN ZKHQ LW J

5DLVH WKH GLV ~~Q~~ ~~WLS~~ ~~V~~ ~~R~~ ~~Z~~ ~~F~~ ~~Q~~ ~~X~~ ~~M~~ ~~X~~ ~~V~~ ~~W~~ ~~E~~  
DJDLQ

/RRN DW WKH URSH ~~Z~~ ~~D~~ ~~W~~ ~~H~~ ~~L~~ ~~W~~ ~~R~~ ~~X~~ ~~W~~ ~~D~~ ~~V~~

\$V \RX SXOO WKH 6HFFKL GLVN EDFN V  
VRPHRQH KROG WKH URSH ZKHUH LW Z  
3XW WKH VHFFKL GLVN EDFN RQ WKH C

6W ~~D~~ ~~U~~ ~~D~~ ~~W~~ WKH GLVN DQG ~~R~~ ~~S~~ ~~D~~ ~~H~~ ~~Z~~ ~~D~~ ~~V~~ KRZ  
XQGHU ~~Z~~ ~~M~~ ~~I~~ ~~N~~ ~~Q~~ ~~R~~ ~~T~~ ~~V~~ RQ WKH URSH DUH  
DSD ~~T~~ ~~K~~ ~~L~~ ~~V~~ LV \RXU PHDVXUH RI WXUEL G

5HFRUG \RXU UHVXOWV

7XUQ WKL V KHHW RYHU WR VHH ZKDV

:KDW GR \RXU UHVXOWV PHD

|                   |                                                              |
|-------------------|--------------------------------------------------------------|
| , I \ R X U V W L | 7 K H L Y H U L V                                            |
| / H V V W K D Q   | X Q K H D O W K \                                            |
| W R P H W H       | K H D O W K \ V L K Q R U P<br>U D Q J H H R O U W K L P D F |

:KDW FDIQ FDW WUKEL R L W M K H U L Y H U "

x VRLO HURVLRQ

x DOJDEORRPV

x SODQNWRQ DQG RWKHU PLFURVFRSL