

! " # \$ % & ' & ()
! " # \$ % & ' \$ (\$)

, (-. &%/0/1 \$2&' . 30



M%!"\$'##,3#,M'!F)%1/!%1\$(\$),#+.%,4/3!%
!"\$%&".)'(+%4\$'12?%43!%)/6\$/1\$F)%&'#!!8%
>XG'1,?%&\$#/1,+%(/6631'(!' /1?%Ia%*&#'+%
[\I]^
:T"\$1\$D\$##,%&\$#)/1%')%(/6@/#!,4+\$%'1%
!"\$'##/91%)<'1M%,%&\$#)/1%!",!%5\$,+)%9'!"%
!"\$'##'6&\$#@\$(!'/1)% ,15%",)%\$+@H,(H
(\$&! ,1(\$b%(/6@/#!%'1%!"\$'##(/1!, '1\$##
Xiguvwtgu"vq"yjqng"dqf{^~!"\$'##\$1!'!.8>%
Xc\$15#'(<?%&\$#/1,+%(/6631'(!' /1?%Ia%
*&#'+%[\I]^
:-"\$##F)%1/!%/1\$%'5\$,+%@/#6%/@%4\$,3!.M%
it is more about confidence...radiance-,%
)\$1)\$%/@%&/9\$#%')%4\$,3!'@3+8>%Xd,1\$++\$?%
&\$#/1,+%(/6631'(!' /1?%I)%*&#'+%[\I]^
:W\$,3!.%')%9"\$1%/1\$F)%\$+@H+/D\$%\$S34\$##H
,!\$)%/3!9,#5)M9"\$1%!'%)%(+\$,##!" ,!%
) /6\$/1\$%+/D\$)%!"\$6)\$+D\$)%9"/++ .M9"' (" %
!"\$##\$@/#\$%&#/V\$(!)%/3!9,#5+ .-6,1'@\$)! '12%
'!)\$+@%'1!/%"/9%/1\$%!,<\$)%(#\$%/@%!"\$6H
)\$+D\$)%L/#%&".)'(+%4\$,3!.N8>%Xd\$#6, '1\$?%
&\$#/1,+%(/6631'(!' /1?%[e%*&#'+%[\I]^

LMN

-"#/32"%6.##\$)\$,#"?"%!'%4\$(\$,6\$%(\$+\$,##
!",!%!"\$%W+,(<%P/1)(' /3)1\$))%7/D\$6\$1!%
&+,. \$5%,%<\$.%#/+\$\$%1/!%/1+.%'1%!"\$%5')(3)H
)' /1%,4/3!%)\$+@H+/D\$?%43!%,+)/%'1%!"\$%
&#,(!'(+%'6&+\$6\$1!,!' /1%/@%'!8%`,("%/@%6.%
& ,#!' ('&,1!)%\$S&#%)\$5%!",!%!"\$'##<1/9+H
\$52\$%/@%!"\$%6/D\$6\$1!%"\$+&\$5%!"\$6%(/6\$%'1!/%
!"\$'##/91%)\$+@H,(\$&! ,1(\$?%9"' ("%')%,%

4\$, 3! .>%Xd\$#6 , '1\$?%&\$#)/1 , +%(/6631' (, !' /1?%
[e%*&#'+%[\I]^8%
d\$#6 , '1\$%)&/<\$% , 4/3!%!' \$%\$6\$#2\$1(\$%
/@% '11\$#%4\$, 3! .% ,)%!' \$%\$15%/@% (/6& , #H
) /1) %/3!) '5\$%/@%/1\$F%) \$+@8%B\$%) , '5%!' , !%
\$D\$1%!' /32"% \$%\$+'6'1 , !5\$%!' \$%5\$)' #5%!' /%
(/6& , #5% "'6) \$+@%!' /%!' "\$#) ?% "\$%#\$(/2H
1' C\$5%!' , !% : !' "\$#5\$, #5% (/6&+\$S!' '\$) %/@%
4\$ '12% "36 , 1?>%) , . '12%!' , !% : /1\$% , +9 , .) %
\$S!) !)' 1% , %& .)' (, +%)& , (\$>%Xd\$#6 , '1\$?%
&\$#) /1 , +% (/6631' (, !' /1?%[e%*&#'+%[\I]^8%
-"') %9 ,)% , 1%\$1+'2' ! \$15\$% '1) '2' !8%*) %"\$%
) , '5?% : \$S!) !' 12% '1% , %& .)' (, +%)& , (\$>%6\$, 1)%
!' , !% /1\$%9' ++% , +9 , .) %4\$%#\$(/21' C\$5%9' !' '1%
!' "\$#%& .)' (, +% #5\$, +'! .8%1\$ /&+\$%9' ++% , +9 , .) %
) \$5%!' "\$%& .)' (, +'! .% /@% , %&\$#) /1?%9"\$' !' "\$#%
/#%1 /!%!' , !% '15' D' 53 , +% #5V\$ (!) % (/#& /#5\$, +%
4\$, 3! .% , 15%#5\$+ , (\$) %!' %9' !' "% 11\$#%4\$, 3! .8%
- "\$#5\$ '1%+' \$) %!' "\$%& , # , 5/S?%9' !' (" %\$S&+ , '1) %
c\$15# (<F) %5\$) (#' &!' /1% /@% "') %@# '\$15) % ,)%
, !!# , (!' D\$?%6\$, 19' ++\$% (/1\$15' 12%!' , !%!' %
) %' 11\$#%4\$, 3! .%!' , !% (/31!) 8%
A% '1U3' #5\$% , 4/3! %' /9% d\$#6 , '1\$% (, 6\$% '1! /%
+/D' 12% "'6) \$+@?% , 15% "\$%) 3#6') \$5%!' , !%!' "\$%
#//!% /@% "') %31' , &&' 1\$)) % , #/) \$%@# /6% "') %
(/1) ! , !1% (/6& , #') /1) %!' /%!' "\$#) 8%B\$%) , '5%
!' , !% : L' 11\$#%4\$, 3! .%4\$2' 1) %9' !' "N%315\$#H
) ! , 15' 12%!' , !% . /3% , #5%!' "\$% /1+ .%&\$#) /1%!' , !%

4\$, 3! .%Xd\$#6 , '1\$?%&\$#)/1 , +% (/6631' (, !' /1?%
[e%*&#'+%[\I]^8% - "\$%#') \$%/@% '1@/#6 , !' /1?%
(/1) 36\$#') 6?% , 15% (, &' ! , +') 6% ,) %" , &\$5%
"/9%&\$ /&+\$%D' \$9%!' "\$6) \$+D\$) % , 15%!' "\$#) %4 .%
way of materialism. Regarding gratifcaH
!' /1?% d\$#6 , '1\$% (/1\$15\$5%!' , !%!' %9 ,) %: M1 /!%
only the gratification for one's self, but
also a gratification of others" (Jermaine,
&\$#) /1 , +% (/6631' (, !' /1?%[e%*&#'+%[\I]^8%B\$%
, #23\$5%!' , !%4\$ '12%!' "\$% /4V\$ (!% /@%5\$) '#5%') %
a source of gratification facilitated by
) / (, +%6\$5' , %' 1%& , #! ' (3+ , #?%9' "' (%2'D\$) %
&\$ /&+\$%!' "\$% /&& /#31' ! .%!' /%4\$%9' /\$D\$#%!' "\$.%
want. This gratification can be found in
!' "\$D , +'5 , !' /1% /@% /! "\$#) 8% d\$#6 , '1\$% (, ++\$5%
!') % , % : @ , g , 5\$?>%) , . '12%!' , !%!') % : ! \$6& /H
, # .%5\$#)) >%3& /1% /1\$F%) \$+@%@ , (+' ! , ! \$) %
#\$ '1D\$1' /1?%43' %' 1%!' , !%#\$ '1D\$1' /1?%
&\$ /&+\$%@ /#2\$! %9' /%!' "\$.% , #5- : \$) (, &') 68>%
d\$#6 , '1\$%5\$) (#' 4\$5%!') % ,) % : @ /# '12%!' "\$%
/3!9 , #5) %' 19 , #5) >%Xd\$#6 , '1\$?%&\$#) /1 , +%
(/6631' (, !' /1?%[e%*&#'+%[\I]^8
T' \$1% ,) <\$5% /9% "\$%&\$#@ /#6) %"') %4\$, 3! .?%
d\$#6 , '1\$%) , '5%!' , !% "\$% : 63) !%!' , .%!' #3\$%!' /%
"'6) \$+@?% , 15% "') %@5\$+' 12) ML , 15N%!' , !%4 .%
#\$ (/21' C' 12%!' , !% , 1% '15' D' 53 , +% (, 12\$) %
5 , '+ .>% "\$%') % , 4+\$%!' /%&\$#@ /#6% "') %' 11\$#%
4\$, 3! .% /3!9 , #5+ .%Xd\$#6 , '1\$?%&\$#) /1 , +%
(/6631' (, !' /1?%[e%*&#'+%[\I]^8% -"') %' 5\$%
/@%!' #3!' @3+%4\$, 3! .% , 2 , '1% , 55\$#) \$) %!' "\$%
53 , +'! .%4\$! 9\$5\$1% ,)) '6' + , !' /1% , 15% , 3! '\$1H
!' (!' ?%43! %' 1% , %13 , 1(\$5%) \$1) \$8% - "\$%
, 3! "\$1!' (!' .% /@%9' ("%d\$#6 , '1\$%) &\$, <) %') %
, 1% , 3! "\$1!' (!' .% /@%) \$+@?% ,) % /&& /) \$5%!' /%
, 3! "\$1!' (!' .% '1%!' "\$%\$. \$) % /@% /! "\$#) 8%
A1%) 135 . '12%&\$ /&+\$% /@% (/+ /#?%A%9 ,) %
(3# /3) % , 4/3! %' /9%# , (\$% '1@/#6\$5%!' "\$#%
&\$#@ /#6 , !' D' ! .?%&\$# (\$&' /1) % /@%) \$+@H9 /#!' %
, 15%) / (, +%) ! , !3) ?% , 15%) \$+@H+ /D\$8%T' ! "%
\$, ("% /@%6 .%& , #!' (' & , 1!) ?%!' %4\$ (, 6\$% (+\$, #%
!' , !%4\$, 3! .%9' !' "% , ++% /@%!') %) 34V\$ (!' DH
' !' \$) % ,) %) !# /12%!' \$) %!' /%5\$)' # , 4+' ! .8%
- , ! \$%X[\] ^%#\$(/21' C\$5%!') ?% '1%&\$ /&+\$% /@%
(/+ /#?% ,) %6\$+ , 1("/+ , ?% ,) % "\$#%) 34V\$ (!) %
@5+! %!' , !%4\$, 3! .%9 ,) % /6\$!' "12% /3!) '5\$%
/@%!' "\$#%#5\$, +68%h1% (/1(\$&' /1) % /@%) \$+@?%
d\$#6 , '1\$%\$S&+ , '1\$5%!' , !%) <' 1% (/+ /#% , 15%
,\$) ! "\$!' (%D , +3\$) % , #5% '1! \$#+ '1<\$58%B\$%) , '5%
!' , !% : . /3%63) !%&\$# (\$' D\$%L6 .%) <' 1% (/+ /#N%
) /6\$%9 , .M9 "\$' ! "\$#%!' %') %5\$) ' # , 4+\$%!' /% . /3%
/#%1 /!%!') %) 34V\$ (!' D\$M6 .%& .)' (, +%&\$#) \$1(\$%
) % , %1\$2 , !' D\$% /1\$?%4 /! "%' 1% "') ! /# .% , 15%
\$D\$1%1 /98M%E /3%) \$5\$6\$% , 15% . /3%) \$5\$W+ , (<>%

\$ 1 1 & (, 0 6 & - (0 > & 6 6 0 % 5 ' 0
9 1 & % / 0 # (0 ! \$? ? & % ()) 3 0

1 (6 & / & 5 ") 0 1 (% " % 4 & \$ ' & 5 % 0 \$) 0 \$ % 0 \$ 6 ' (1 % \$ ' & 2 (0
' 5 0 # \$ 1 1 & \$ / (0 & % 0 ! & % , " 0 & % , & \$

n , 3 # \$ 1 % * 8 % - # 3 V ' + + /

! " # \$ % & ' () * + \$, \$ - * \$ # . / # 0 1 2 \$ % 0 & 3 \$ - \$ ' & * + # 0 \$ 1) # / # 4 \$ 5 & 0 \$ % 6 ' ' \$ 2 # . 2 7 \$ 1 ' # - , # \$ 8) ,) 2 \$ (((4 " & * & 0 , 9 & 6 0 * - ' 4 / & 3

& % ' 1 5 , " 4 ' & 5 %

* + + % L u c f j w) N % \$ 1 ! \$ # % ! " # / 3 2 " % , % # ' ! 3 , + %
& # / (\$) % L , - * * < - , - N % 9 " ' (" % \$ 6 & ,) ' C \$) % ! " \$ %
5 ') V 3 1 (! ' / 1 % 4 \$! 9 \$ \$ 1 % / # 5 ' 1 , # . % + ' @ \$ % , 1 5 % , %
' + @ \$ % / # ' \$ 1 ! \$ 5 % ! / 9 , # 5 %) & ' # ' ! 3 , + % + ' 4 \$ # , ! ' / 1 ? %
, 1 5 % , + + %) ' 2 1 ' @ . % , % 6 , V / # % (" , 1 2 \$ % ' 1 % # ' ! 3 , + %
) ! , ! 3) 8 % 0 / # % 9 / 6 \$ 1 ? % ! " \$ % (" , 1 2 \$ % ' 1 % ' 5 \$ 1 ! ! . %
, 1 5 %) ! , ! 3) % @ / + + / 9 ' 1 2 % ' 1 ' ! ! , ! ' / 1 % ') % & , # ! ' (H
3 + , # + . % 5 # , 6 , ! ' (? %) ' 1 (\$ % 3 1 + < \$ % 6 \$ 1 ? % 9 / 6 \$ 1 %
are unequivocally identified with houseH
"/ + 5 \$ #) " ' & ? % " / 6 \$? % , 1 5 % @ , 6 ' + . 8 % - " \$ %) / (' \$! . %
' 1 ! / % 9 " ' (" % , % 9 / 6 , 1 % \$ 1 ! \$ #) % 5 ' @ @ \$ #) % # , 5 ' H
(, + + . % @ # / 6 % ! " \$ %) / (' \$! . % ' 1 % 9 " ' (" %) " \$ % + ' D \$ 5 %
,) % , % / 3) \$ " / + 5 \$ # 8 %
- " ') % U 3 / ! \$ % @ # / 6 % n . 1 1 % - \$) < \$. % ; \$ 1 ! / 1 %
5 \$) (# ' 4 \$) % ! " \$ % & # / @ / 3 1 5 % 5 ' @ @ \$ # \$ 1 (\$ % 4 \$! 9 \$ \$ 1 %
4 \$ ' 1 2 % , % u c f j w % X B ' 1 5 3 % ,) (\$! ' (^ % , 1 5 % 4 \$ ' 1 2 %
, % + 0 ") * % X " / 3) \$ " / + 5 \$ # ^ % ' 1 % B ' 1 5 3 % A 1 5 ' , 1 %
) / (' \$! . 8 % - " \$ % U 3 / ! \$ % , +) / % & / ' 1 !) % / 3 ! % ! " , ! %
, % 9 / 6 , 1 F) % (" / ' (\$ % ! / % 4 \$ (/ 6 \$ % , % u c f j w % ') % , %
, 5 ' (, + % / 1 \$ % ! " , ! % ' 1 D / + D \$) % # \$ V \$ (! ' 1 2 % ! " \$ %
/ + \$ % @ % + 0 ") * ' % X @ \$ 6 , + \$ % " / 3) \$ " / + 5 \$ # ^ ? % ! " \$ %
5 / 6 ' 1 , 1 ! % + ' @ \$ % & , # , 5 ' 2 6 % \$ S & \$ (! \$ 5 % / @ % 9 / 6 \$ 1 8 %
o \$ # . % @ \$ 9 % A 1 5 ' , 1 % B ' 1 5 3 % 9 / 6 \$ 1 % (" / /) \$ % ! / %
4 \$ (/ 6 \$ % u c f j w) % , 1 5 ? % 4 \$ (, 3) \$ % ! " \$ ' # % 1 3 6 4 \$ #) %
, # \$ %) 6 , + + ? % ! " \$ # \$ % ,) % 4 \$ \$ 1 % 6 ' 1 ' 6 , + %) (" / + H
, #) " ' & % 9 # ! ! \$ 1 % , 4 / 3 ! % ! " \$ 6 8 % - " \$) \$ % 9 / 6 \$ 1 ? %
" / 9 \$ D \$ # ? % , # \$ % ' 6 & / # ! , 1 ! % @ / # % 3 1 5 \$ #) ! , 1 5 ' 1 2 %
4 / ! " % , % 9 / 6 , 1 F) % & + , (\$ % ,) % , % / 3) \$ " / + 5 \$ # %

* = |



4! \$?' (10&&30' ! (0-1((, 5#05-0) \$%%. \$) \$30
>! \$' 09(45# &%/0\$0) \$, ! "0! \$)0' 505--(10
> 5# (%

LMN

*)%!" /) \$% '1%3#4, 1%, #\$,)%" ,D\$%4\$ (/6\$%+\$))%
4/315% !/%!# ,5'!' /1, +%B'153%1/#6)?%!'%" ,)%

')'2\$8%7,'1!, '1'12%5,32"!\$#)F%D'#2'1'!.%
+\$,5)%!/4\$!!\$##6,##',2\$%6,!("\$)?%9"(" %
'1%!3#1%(!,1%6,<\$%!"\$%@,6'+.%6/#\$%&/9\$#@3+
 ,15%,%@,6'+.%9"/)\$%9/6\$1%,##\$%31U3\$)!'/1H
 ,4+.%(")!\$%9'++%2,'1%"/1/#%'1%!"\$%(/663H
 1'!.8%A1%!"')%9,.?%9/6\$1F)%\$S3,+%,('D'!.%
/#%+,(<?!"\$#\$/@%')%3)\$5%!(/3+!'D,!\$%&/9\$##
 for men, who are the main beneficiaries of
'1(\$,\$)5%@,6'+',+%"/1/#%,15%&/9\$#8%

LMN

A1)!\$,5%/@%(3+!'D,!12%&/9\$##@/#%6\$1?%,%
 @6\$,+\$\$%#1/31(\$#%(!,1%(3+!'D,!\$%)&'#!'3,+
 &/9\$##@/#%"\$#)\$+@%!"#/'32"%(\$+'4,(.8%0\$S3,+
 ,(!'D'!.%)%),'5%!/5#,'1%&/9\$#?%'1%!"\$%
 @/#6%/@%2-1-,%X!"\$%'11\$##%\$,!%(\$,\$,!\$5%4.%
 #\$\$+'2'/3)%&#,(!'(\$^?%#@%/6%,%&\$#)/18%W\$'12%
 (\$+'4,!\$?%,,%9\$++%,,%/!"\$##%&'#!'3,+&#,(H
 !'(\$)%3("%,)%)'12'12%E"-9-*,%?%#\$(!'12%
 3-*20-,?%6\$5'!,!'12?%,15%)\$#D'12%/'!\$#)%
 X,#8-^?%,++/9)%9/6\$1%!/43'+5%2-1-,8%
 B'153)%4\$+'\$D\$%!",!%!"')%\$%,\$!?'9"\$1%,((3H
 63+,\$5?%')%3)\$5%!/5\$)!#/.%'6&3#!'!.?%
 4# '12'12%,%ucfjw%(+)\$##%,15%(+)\$##!/!"\$%
 &3#\$\$)!%!,!\$%/@%6\$#2'12%'"\$##-23-%9'!"%
 W#,"6,%?'3)%3,("\$D'12%3&?,"-8!%*)%/1\$%
 43'+5)%3&%2-1-,?%'!%')%4\$+'\$D\$5%'"\$%/#%)"\$%
 (,1%2,'1%&'#!'3,+%&/9\$#)?%3("\$%,)%!"\$%
 ,4+'!.%!/%)&\$,<%!/!"\$%2/5)%/#%2/55\$))\$)?%
 ",D\$%&#\$('\$1!%D')'/1)?%,15%\$D\$1%(/1!#/+
 ,1/"\$##&\$#)/1F)%!"/'32"!)%/#%,(!'/1)8
 %

LMN

0\$(/15?%9/6\$1%",D\$%63("%6/#\$%@\$5\$5/6%
 ,)%#1/31(\$#)%!"',1%!"\$.%/"\$#9')\$%+'<\$+. %
 9/3+5%" ,D\$%",5%,)%6,##'\$5%9/6\$18%-')%
 ')%/1\$%/@%!"\$##\$,)/1)%!"',!%#131(' ,H
 !'/1%')%!"/'32"!%!/4\$%'1,&&#/#%!',!\$%!/ %
 9/6\$1%'1%!"\$%#,'5'!/1,+?%#!' /5/S%\$S!)%
)3("%,)%!"\$%D"-03-,"-,20-\$+'!\$#,'13#8%
 *)%c",15\$+9,+%1/!\$)?%:-",!%#131(' ,!'/1%
 '6&+'\$5%@\$5\$5/6%,15%'15\$&\$15\$1(\$%9/3+5%'1%
 '!)\$+@%#15\$#%'!%'1,&&#/#%!',!\$%@/#%9/6\$18>?%
 h1\$%/@%!"\$%9,.)%!"')%@##\$5/6%6,1'@%)!)%
 '!)\$+@%')%!"',!%@6\$,+\$\$%#1/31(\$#)F%#!#,D\$+%
 ,15%6/D\$6\$1!)%,#\$\$%63("%%+\$)%#)!#(!\$58%
 e%*1/'1\$!!\$%`8%;\$G,&/+?'%:n\$D\$`D\$#.!'"12%,15%0'12%!/ %
 Y/5_-\$%\$i\$#@/#6,1('\$%@/%
 ;\$D!'/1,+%*)(!\$')6%4.%0\$6,+\$\$0,5"3)%/@%tj,V,!)",18>%
 X:/(!/#,+%;')\$#!,!'1/1%'6/#.%Q1'D\$#)'!.?%[\J^?%K\%eB
]%0/15#,n8%B,3)1\$#?%Yqpfgtkpi"ykvj"Ucfjwu<"Cuegvkeu"kp"
 vjg"Jkpfw"Jkocncf cuXA15',1,&/+)'_A15',1,%Q1'D\$#)'!.%
 i#\$\$)?%[\]^?%I][8
 q#c",15\$+9,+?%F&3#*%)\$G/"O#=\$&E#,%?a]8

A15\$5?%'!%')%4\$+'\$D\$5%!",!%!"\$#%)"/3+5%
 4\$%,%&,)%)\$%'1%,%#1/31(\$#)F%&'#!'3,+
 V/3#1\$.%9"\$#\$\$%,%ucfjw%63)!%#!#,D\$+%\$S!\$1H
)'D\$+.?%3)3,++.%@/#%6,1.%.\$,)#%9'!"%
 D\$#.%@9%&/))\$)/1)?%D')'!'12%D,##/3)%
 &'2# '6,2\$%'!\$)8%-\$%&/1!%/@%'!')%')%)/%
 !",!%!"\$%ucfjw%+\$,#1)%5\$!,("6\$1!%!/4/!"%
 &+,\$)%15%/4V\$(!)?%,)%9\$++%,)%!/1/!%
 2\$!%!/(/6@/#!,4+\$%'1%/1\$%&+,(8%-"')%
 ')%!.&'(+,+.%5/1\$%9"\$1%,%#1/31(\$#%)%
 ./312\$#?%,)%!"',!%')%9"\$1%/1F)%&".(,+%
 4/5.%(,1%)!,15%!/6/D\$%,#/315%,%+!/%,15%
 !#,D\$+%+/12%5'!)!,1(\$)8"

LMN

-"#5?%9/6\$1%9"/%#1/31(\$% ",D\$%!"\$%
 (" ,1(\$%!/%)#\$('\$D\$%,1%\$53(,!' /1%!",!%!"\$. %
 +'<\$+. %9/3+5%1/!" ,D\$%4\$5\$1%,4+\$%!/%)#\$('\$D\$%
 ,)%"/3)\$"/+5\$#)8%*)%A%6\$1!' /15%'1%!"\$%
 +,)!%\$(!' /1?%9/6\$1%9"/%9,1!,1%\$53(,H
 !' /1%/@!\$1%!,<\$%, -* * <-, -%) /%!"\$. %, #, \$, 4+\$%
 !/%,!!,'1%,1%\$53(,!' /18%o\$#.%@9%9/6\$1%
 @#/6%#3#+%,#,\$,)%",D\$%!"\$%&&/#131'!.%!/ %
 #\$('\$D\$%,1%\$S!\$1)'D\$%\$53(,!' /1?%,)%!"\$. %
 ##\$<\$&!%"/6\$%4\$(,3)\$%/@%\$,#)%#3'1\$5%
 #&3!,!' /1%/#%!",!%!"\$%2'##%9'++%!"\$1%4\$%
 31",&&.%'1%,%6,##',2\$%9"\$#\$\$%)"\$%63)!%4\$%

"\$#)\$+@8^%W\$(,3)\$%/@%!'')?%@\$6,+\$\$ucfjw)?%
,+!"/32"%! "\$.\$%+\$,5%31(/1D\$1!'/1,+%'D\$)?%
:,\$\$%"'2"+.%#\$&\$(!\$5%4.%/#5'1,##.%,15%\$D\$1%
(/1)\$#D,! 'D\$%&\$/&+\$%,)%)#3(\$)%/@%)&'#H
'!3,+%&/9\$##%,15%\$D\$#.5,.%6/#,+!'!8>^%W.%
4\$(/6'12%,##\$1/31(\$#?%,%9/6,1%,(U3'\$)\$)%
,%&#\$D'/3)+.%31,!,'1,4+\$%)/(' ,+% ,15%
'!3,+%)! ,!3)8%-"')%')%4\$(\$)\$%!"\$%9/6,1%
')%1/9%')%@/#6,+,.%(/1)'5\$#5%315\$##!"\$%
!3!\$+,2\$%/@%,%+606%,15%9'+%+, !#\$%4\$%,4+\$%
!/%'1'!',!\$,%,15%,\$,("%"\$##%/91%5')(' &+\$)% '@%
) "\$%) /% (" //)\$) 8%

LMN

O'@!"?%@\$6,+\$\$ucfjw)%,\$\$,4+\$%!/"/+5%
63("%6/#\$%&/9\$##!" ,1%!"\$.%9/3+5%",D\$%,) %
#3#+?%&/#?%+/9H(,) !)\$%"/3)\$"/+5\$#)8%
A15\$5\$5?%@\$6,+\$\$"/3)\$"/+5\$#)%",D\$%+'!!+\$%
&/9\$##'1%!"\$'#%+'D\$)%/D\$##!"\$'#%"/3)\$"/+5)%
/#%\$D\$1%!"\$'#%/91%4/5'\$)8%A1%(/1!#,)!?%
@\$6,+\$\$ucfjw)",D\$%&/9\$##/D\$##4/!"&\$%&+\$%
,15%&#/&\$#!.8%O'#)!?%)/6\$%@\$6,+\$\$ucfjw)%
#31%!"\$'#%/91%,)"#,6)%/#%ocpfktu8%j311'12%
/1\$%/@%!"\$)\$%\$)! ,4+)"6\$1!)"%)%,1%&/&#H
!31'!.%!/!(/1!#+%,%,#2\$%,6/31!%/@%
&#/&\$#!.2%6/1\$.?%,15%&\$/&+\$8%O/#%1)! ,1(\$?%
0" 'D%13#'?%,%@\$6,+\$\$ucfjw%'1@/#6,1!%/@%
;\$G,&/'F)?% "\$,5)%%,#2\$%,)"#,6%/3!)'5\$%
/@%!"\$%('!.%/@%Q5,'&3#8%0"\$%)!,.)%,!%!"\$%
,)"#,6%&/#%)'S%6/1!)"%/@%!"\$%.\$,##,15%!"\$%
#\$)!%/@%!"\$%!'6\$%) "\$%#!#,D\$+)%!/ %W/64, .?%
9"\$##\$%) "\$%D')!)"%5D/!\$%)%,15%(/++\$(!)%
5/1,!'/1)%@/#% "\$##,)"#,68%T"\$1%;\$G,&/'%
6\$!%"\$#?%0" 'D%i3#'9,)%'1%!"\$%&#/(%)%/@%
",D'12%,%,#2\$##,)"#,6%(/1)!#3(!\$5%!/ %
,((/66/5, !\$%,++,%!"\$%23\$!)%9"/%9') "\$5%!/ %
D')'!%"\$##)'!\$8%-"')%@\$6,+\$\$ucfjw%9,)%'1%
("#2\$%/@%4352\$!'12%,15%&,.'12%@/#%,++%
/@%!"\$%(/1)!#3(!'/1%/@%!"\$%1\$9%43'+5'12?%
,)%9\$+%,)%'1!\$##,(!'12%9'!"%!"\$%6,+\$\$
(/1!#,(!/#%!/5'(!,\$%9",!%,6\$1'!'\$)% "\$%
9,1!\$5%@/#%!"\$%1\$9%,)"#,68^%
,

LMN

P"/)'12%!/##\$1/31(\$%@\$1%,+)/%,++/9)%%,%
9/6,1%!/4\$/(6\$%6/#\$%&/9\$#@3+%9'!"'1%"\$##
I\%:\$1!/1?%Hqocng"Cuegvkeu"kp"Jkpfwkuo?%a8
II%c".15\$+9,+?%F&3#*\$)*\$G/"0#=\$E#,?%e8
I[%:\$G,&/'?%:n\$,D\$%`D\$#!."12%,15%0'12%!/ %Y/5?>%Ia]8%
;\$1!/1%,+)/%1/!\$)%!" ,!%)6\$%9/6\$1%9"/%V/'1%9\$++H\$)! ,4H
+') "\$5%ucfjw%/5\$#)% (,1%4\$(/6\$%\$/1/6' (,+,.%&/9\$#@3+%,)%
,%

1

! 5 > 0(' ! &4\$60&)0
/ (%(' &4\$66. 0(, &' &%/0

:5/91)!#\$,6>%2\$1\$)8%

5)+60#\$JI\$!"#\$)*2#0-/2)&*\$E#2(##*\$+##,\$H7\$@7\$
cpf"E0"
K##,\$()2"\$#1),2-2)/\$0#'-2)&*,")1,\$2<1)/-' '<\$

')%<1/91%,4/3!%" /9%(\$++H) (+,\$%2\$1\$!' (%
' 1!\$#, (!' /1%1\$!9/#<)%D, #, #, (#/))%63+!' &+\$%
&"\$1/!.&\$>%X01' !<' 1?%[\II^8%W\$(,3)\$%!"\$)\$%
:((\$++H) (+,\$%2\$1\$!' (%' 1!\$#, (!' /1)%1\$!9/#<)>%
,#%\$31<1/91?%9\$% (,1%,))36\$%!" ,!%!"\$%!"#3\$%
#/+,\$%/%&\$&'!) ,)')%' 1%&"\$1/!.&\$%5\$D\$+/%&H
6\$1!%')%,+)/%31<1/91%\$X01' !<' 1?%[\II^8%*+)/
3!' +'C'12%!"\$%&, '1!' 12%\$\$S,6&+\$?% '@%2\$1\$%
W%X,55%4+3\$^%9,)%5\$!\$#6'1\$5%!/,%&#/53(\$%
,%5')\$,)\$?%, %&, #6\$!%9/3+5%9,1!%!"\$%2\$1\$%
(, ,12\$5%!"\$%!/,%\$1(/5\$%@/#%,%1/1H@,!, +%
(/+/#8%B/9\$D\$#?%!"\$%\$%9/3+5%)"!++%4\$%31'1H
!\$15\$5%(" ,12\$)%/@%&"\$1/!.&\$%XQ1'D\$#)'!.%
of Utah). In this case of figure 3, if
!"\$.% (" ,12\$5%2\$1\$%W%#@#/6% (/5'12%@/#%4+3\$%
!/% (/5'12%@/#%#5?%!"\$%&"\$1/!.&\$%/%@"\$%
('#(+,\$%9/3+5%)"!++%4\$%&#%\$)1!b%"/9\$D\$#?%
!"\$% (/+/#'12%9/3+5%)"D\$% (" ,12\$5%#@#/6%
4+3\$%!/,%#5\$%*+!" /32"%#5%6, .%4\$%, %<1/91%
1/1H5')\$,)\$%&"\$1/!.&\$?% (" ,12'12%!" ,15%1/!%
<1/9'12%!"\$%\$\$S, (!%&"\$1/!.&' (%5/91)!#\$,6%
effects violates Buchanan's frst counting
(' &+\$8%
G/!%/1+. %5/%2\$1\$)%9/#<%/2\$!"\$%#%'1%
(#\$,!'12%5'@@\$#1!%&"\$1/!.&\$)?%!"\$.% ,+)/%
9/#<%/2\$!"\$%#!'#/'32"/3!%!"\$%4/5.8%-'")%
(/1(\$&%')%,2, '1%4\$)!%#&#%\$)\$1!\$5%4. %B/S%
2\$1\$)8%B/9\$D\$#?%!"\$%@31(!' /1'12%/@%B/S%
2\$1\$)% (/1!#,5' ()%W3(" ,1,1F)% (/31!'12%
(' &+\$%@/3#8%-'")%(' &+\$%)" ,!\$)%
!" ,!%!"\$%\$%@\$(!)%@#/6%\$5!'12%63)!%)" ,. %
:(/6&,#!6\$1!+'C\$5>%9!"'1%!"\$%&#%)/1%
,15%1/!%)&#\$,5%!/,%!"\$%&,#!)%/@%!"\$%
4/5. %XW3(" ,1,1?%[\II^8%*+!" /32"%)/6\$%
2\$1\$)%@31(!' /1%'1%!")%6,11\$#?%!"\$%H
(' &+\$%5/\$)%1/!% (/1)'5\$#%2\$1\$)%!" ,!%,@@\$(!%
!"\$%\$1!"#%\$4/5. %\$1/!%V3)!%/1\$%:(/6&,#!H
6\$1!>%X)3(" ,%)!"\$%5'2\$)!D\$%#!, (!%/#%!"\$%
4#, '1^8%-\$)\$%:(#/)H(/6&,#!6\$1!>%2\$1\$%
relationships are best exemplified in the
5\$D\$+/%6\$1!%/@%6' (\$8%*+!" /32"%!"\$.% ,#%\$%
1/!%#36,1)%6' (\$%,#%\$ (/1)'5\$#%5\$%, %6/5\$+/%
/#2,1')6?%6\$,1'12%!" ,!%!"\$%#%#%\$)3+!)%#@%/6%
!\$)! '12%6'6' (%!"\$%#%\$)3+!)%/@%!"\$%!" ,!%
9/3+5%/((3#%/1%"36,1)%X@/#%\$S&#%'6\$1!)%
9\$% (,11/!%&\$#@/#6%/1%"36,1)%53\$%!/,%\$!"'H
(,+!' .%#%\$,/)^8%7B/S%'1%6' (\$%#%\$23+ ,!\$)%
!"\$%2#/'9!"%/@%, #6%4/1\$)%XP#%\$!</)%\$!%, +8?%
[\q^8%T"\$1%!"')%2\$1\$%')%#%\$6/D\$5?%6' (\$%
4\$2'1%!/,%5\$D\$+/%&1/#6, ++. ?%43!%4\$ (,3)\$%
!"\$.% (,11/!%2#/'9%#@/#\$+'64)?%!"\$.% 5'\$%, %@9%
9\$%<)'1!/%5\$D\$+/%6\$1!%XP#%\$!</)%\$!%, +8?%
[\q^8%-'")%\$S!#%'6\$%\$S,6&+\$%'"2'+2'!%)

!"\$%@31(!' /1%/@%2\$1\$)%'1%5'@@\$#1!%&,#!)%
/@%!"\$%4/5.8%*+!" /32"%!"\$%7B/S%2\$1\$%5/\$)%
1/!%, @@\$(!%+'@H)3)! , '1'12%/#2,1)%X)3(" ,%)
!"\$%\$,#!%,15%4#, '1^?%!")%#%6/D, +%1/!%/1+. %
,@@\$(!)%4/1\$%2#/'9!"?%43!%, @@\$(!)%!"\$%+'@%\$%
/@%!"\$%6/3)\$%/D\$#, ++8

Hkiwtg"5<"Vjg"gfkvkpi"qh"cp"grkuvcvke"igpg"chB
hgevuv"vjg"gpF"rjgpqv(Irg0"K

*\$2") ,\$.% -31' #7\$+##\$H\$) , \$#1) ,2-2)/\$2\$+##\$@\$
cpF"igpg"D"ku"grkuvcvke"vq"igpg"E0"Vjg"eqpegrv"
qh"grkuvcvku"ku"gzgornk1gf"d{"v"vjg"ejcpig"qh"ipcn"
igpg"rtqfwev"*qt"v"vjg"dnwg"ekteng+0"Dgecwug"igpg"
D"cffu"tgf"kpuvvcf"qh"dnwg"vq"v"vjg"rckpv"cpF"E"
uvknn"etgcvgu"v"vjg"ekteng. "dvw"v"vjg"ekteng"ku"tgf"
kpuvvcf"qh"dnwg"dgecwug"qh"v"vjg"ejcpig"kp"qpg"
igpg"*igpg"D+0"*Hkiwtg"cfcrvgf"htqo"Wpkxgtukv{ "
&%\$02-"N

- "#/32"%!"\$%,1,+.)')%/@%:3&)"#\$,6>%
,15%:5/91)!#\$,6>%2\$1\$)?%&'!) ,)')?%,15%
:(#/)H(/6&,#!6\$1!>%2\$1\$%'1!\$#, (!' /1)?%1/\$%
4\$2'1)%!/,%315\$#)! ,15%!"\$%(/6&+\$S'!.%4\$%"15%
2\$1\$%@31(!' /1'128%*+!" /32"%4,)' (%4'/+2. %
\$S&+, '1)%2\$1\$%'1!\$#, (!' /1)%'6&+)'!H
(,++?%!"\$.% 21/#\$%!"\$%) ,6\$%\$+\$6\$1!)%/@%
2\$1\$%'1!\$#, (!' /1)%!" ,!%W3(" ,1,1%5/3)8%
0/6\$?%43!%1/!%, ++?%2\$1\$)%9/#<'1%, %!3\$%
:3&)"#\$,6>% ,15%:5/91)!#\$,6>%#%\$+, !' /1)"' &b%
"/9\$D\$#?%6/)!%5%/1/!%@31(!' /1%'1%!"')%
6,11\$#8%B/6&+\$S%2\$1\$%&,!"9, .)% ,15%&%'H
!) ,)')%5')(#\$5'!%W3(" ,1,1F)% (/31!'12%'1H
(' &+\$%/1\$?%,)%2\$1\$%'1!\$#, (!' /1)%/@%1\$1%6\$,1%
!" ,!%/1\$%)\$6'12+. %5/91)!#\$,6>%2\$1\$%6, . %
(!3, ++. %1/!%4\$%,15%(/3+5%#%)3+!'1%31'1H
!\$15\$5%&"\$1/!.&' (%\$@@\$(!)8%-\$)\$%'"1!\$#H
(!' /1)% ,+)/%6\$,1%!" ,!%!"\$%2\$1\$)%5%/1/!%
!"\$%4/5. %5')(#\$5'! '12%W3(" ,1,1F)%'1H
(' &+\$%@/3#?%,)%!"\$%9/3+5%4\$%, #5%@/#%!"\$%
'1!\$#D\$1!' /1F)%\$@@\$(!)%!/,% ,. % (/6&,#!6\$1H
! , + 'C\$58

LMN%

52&%/0-51 > \$1, 0 > &' ! 04\$"' &5%

*)\$)\$6'12+. %&+,3)'4+\$%,)%W3(" ,1,1F)%
(' &+\$%)%6, .%4\$?%!"\$.% 5%/1/!%"/+5%3&%

/l(\$(\$+/\$)+.\$)(#3!'1'c\$58%P/1)'5\$#'12%
the growing field of genetics and genetic
\$12'1\$#\$'12%!'#/'32"/3!%!"\$%+,)!%5\$(\$,5\$?%
!"\$##\$%)%,\$&/)'4'+'.!%!"!%!"\$)\$%&#/'4+\$6)%
9\$##\$%1/!%<1/91%1@/#6,!'/1%1%[\II8%W3!
31!'+'9\$%"\$,D\$%,%@3++%315\$#!,15'12%/@%
2\$#6+'1\$%\$5!'12?%2\$1\$)%15%!"\$'##,)/H
(,!\$5%@31(!'/1)?%,\$+/12%9!"%9",!%#,'!)%
,\$%(/!#/'++\$5%4.%9"("2\$1\$)?%9\$%63)!%
&#/((\$5%9!"%(\$,3!'/18%B/9\$D\$#?%!"\$#\$%,\$%\$
5')\$,\$)%!,!%,#%\$(/!#/'++\$5%4.%/1\$%2\$1\$-%
7\$15\$+'1%5')\$,\$)\$8%W\$(,3)\$%!"\$%5')\$,\$)\$5%
2\$1\$%')%<1/91%,15%9\$++%315\$#!//5%@/#%
6,1.%7\$15\$+'1%5')\$,\$)\$)?%2\$#6+'1\$%\$5!'12%
@/#%!"\$)\$%#,'!)%')%)/6\$!"12%9\$%(/3+5%
(/1!'13\$%&3#)3'128%*)%2\$1\$%\$5!'12%!"\$("H
1/+2'\$)\$%4\$(/6\$%6/#\$%,5D,1(\$5?%!"\$#\$%')%,\$
&#/'4,'+'!.!%!"!%5')\$,\$)\$%+'<\$%P0%,15%B;!
(/3+5%4\$%:(3!%/3!>%/@%!"\$%2\$1/6\$8%
W3!%31!'+'9\$%@3++.%315\$#!,15%6/#\$%
(/6&+\$S%#!#,'!)?%9\$%)"/3+5%5')6')%
W3(",1,1F)%23'5\$+'1\$)%15%#D\$#!%!/%)
!"\$%i#\$(,3!'/1,#.i#1('&+\$%XW3(",1,1?%
[\I[^8%h3#%<1/9+\$52\$%')%##\$+,!'D\$+.%31(\$#H
!, '1%#2, #5'12%!"\$%\$@@\$(!)%/@%2\$#6+'1\$%
\$5!'12?%,15%9\$%(,11/!%6,<\$%&#/'4,4+\$%
,)\$#!'1/1)%4/3!%!"\$%#')<)%/@%2\$1\$%
\$5!'12%'1%')!3,!'/1)%/!"\$%#%!"1%\$5!'12%
7\$15\$+'1%5')\$,\$)\$8%T\$%,#5%'1%!"\$%)6\$%
('&+\$%/@%31(\$#!,'1!.!%!"!%W3(",1,1%
4\$+'\$D\$)%9,##,1!)%!"\$%&#\$(,3!'/1,#.i#1H
('&+\$%XW3(",1,1?%[\I[^8%-\$%i#\$(,3!'/1,#.i#
i#1('&+\$?%&3!%)'6&+.?%)%!"\$%('&+\$%/@%
#53('12%#')<)p1/!%5/'12%)/6\$!"12%4\$(,3)\$%
'!%,)%!"\$%&/\$1!'!%,+%!/%,(,3)\$%)\$#/'3)%",#6%
XW3(",1,1?%[\I[^8%h1(\$%9\$%+\$, #1%6/#\$%,4/3!
2\$1\$H\$1D'#/16\$1!%'1!\$#,(!'/1?%(/6&+\$S%
2\$1\$H2\$1\$%'1!\$#,(!'/1)?%,15%4'/+/2'(+%,
@,'+H),@%)?%9\$%(,1%!,<\$%/1%W3(",1,1F)%
(/31!'12%('&+\$)8%Q1!'!+%!"\$1?%'!%')%
'6&#/'1!%,15%1\$(\$),#.!/,%&#/((\$5%!/9,#5)%
2\$1\$%\$5!'12%9!'!%\$(,3!'/18

> 51:)04&' (,

W3(",1,1?%*++\$18%mi+,. '12%Y/5?%
j\$)&/1)'4+.8m#@#22#0\$!"-*\$Q63-*I\$
Vjg"Rtqokug"cpf"Rgtknu"qh"Gpjcpkpi"
G60,#'8#8%hS@/#5%Q1'D\$#)'!.i#%)?%
[\I[?%&&8%qKHIe8
P#\$!\$</)?%P#')%d8?%T,12?%E'12?%Y#\$\$1?%
'#'(;%8?%GAOP/P/6&,#!'D\$0\$U3\$1('12%
i#/'2#,6?%7,#!'1?%d,6\$)%O8?%j,)9\$'+\$#?%
d/"1%d8?%,15%W\$"#12\$#?%j'(",#5%j8%
"Regulatory Divergence Modifies Limb

n\$12!"4\$!9\$1%7,66,+)8m%K#*#,\$R\$
D#8#&13#*2?%[[?%[\q8%*((\$))\$5%I%*%%
[\I]8
P.)!'(%O'4#/)')%O/315,!'/18%4/3!%P.)!'(%
O'4#/)')8m%EH"Hqwpfcvkqp?%!!&)_ss
9998(@@8/#2sT',!H')HPOs*4/3!HP.)!'(H
O'4#/)')s8%*((\$))\$5%Ie%*%%[\I]8%
G,!'/1,+%*(,5\$6.%/@%0('\$1(\$)%15%G,!'/1,+%
*(,5\$6.%/@%7\$5('1\$8%MT!'!%0!#'12\$1%
hD\$#)'2"!?%B\$#!,4+\$%B36,1%Y\$1/6\$%
'5!'12%P/3+5%W\$%*++/9\$5%@/#%0\$#/'3)%
P/15!'1/1)8m%Pcvkqpcn"Cecfgokgu"Ygd"
;#08#0?%IK%O\$48%[\I]?%jvvr<11yyy:0
pcvkqpcncecfcgokgu0qt1ilprkpgyu1pgyukvgo0