! "#$"%&'(&)*"%#)$+'
,"-.%$ / "&$'01'-2)30#0-2+'
(45678795:9;6'<=:7>6'0:;?@46'ABABCAD'
!
-E@?=>=FEG'<=:7>6'&:HI67J'KLLD1'
#6?M'945'#=N@6;G'
'
!

"#$$!%&'(! ;+0<'/,<.'4!=:>#':!?#@@0!
! !
)*+,-'.+./0! A+$B+&!.CCB,&!D./'04!
1.+!23456724568! 9&:0!2345673456! 1.+!#+:!%/&0
!
<?9>>7==H'409'P9??';69NE@48'=4?@46Q!

%"U ()%" / "&$#'

P3-/+*4!C..30%*0(3!*0%!H*4.)(),*.)&0! QRS! !
T!K0+)03!N/)UU3'! ! ! ! QRS!DVS!3*(#F!
9)%.345!H*,34!! ! ! ! QVS!
J)0*+!H*,34!! ! ! ! ! WVS!
!
P3-/+*4!C..30%*0(3!*0%!,*4.)(),*.)&0! X!

.&-3.#34!>).#!*!43N/3'.!6&4!43+)36!',3()6$)0-!.#3!0*./43!&6!.#3!*((&5 5&%*.)&0!=3)0-!43N/3'.3%?!
\#3!a " K!H&+)($!&0!C((&5 5&%*.)&0!6&4! 9 3%)(*+!8++03''!*0%!6/4.#34!)06&4 5*.)&0!43-*4%)0-!.#)'!
,&+)($!(*0!=3!6&/0%!*.!
#..,;EE/>&?(*E/0)1'3(E,%6E*(*%3 5)(c,&+)()3'E*,,3*+'E*((&5 5&%*.)&0c 5 3%)(*+?,%6?!
#"31C'%"-0%$",'.S#"&<"'10%/'
M./%30.'!>#&!3:,34)30(3!*0!/03:,3(.3%!)++03''!&4!)0G/4$!&4!*0!3:.30/*.)0-!()4(/5'.*0(3!DTd!#&/4'!
&4!+3''F!.#*.!)'!'/66)()30.+$!'31343!.&!.3 5,&4*4)+$!430%34!.#3 5!/0*=+3!.&!5 33.!*(*%3 5)(!43N/)43 5 30.'!
D3?-?7! *..30%)0-! +3(./43'! &4! +*='7! >4).)0-! .3'.'! &4! 5)%.34 5! 3:*5 '7! (&5,+3.)0-! *0%! '/=5)..)0-!
*'')-0 5 30.'7!,*4.)(),*.)0-!)0!,43'30.*.)&0'F!'#&/+%!'3+6B%3(+*43!/')0-!.#3!&0+)03!M3+6BP3,&4.3%!
C='30(3!,&4.*+?!!\#)'!&,.)&0!'#&/+%!=3!/'3%!)0!')./*.)&0'!>#343!.#3!'./%30.!3:,3(.'!.&!43'/5 3!
(%3 5)(!43',&0')=)+).)3'!>).#)0!Td!#&/4'!&4!+3''?!!!
\#3!6&++&>)0-!(&0%).)&0'!*43!)0!,+*(3!6&4!'3+6B43,&4.)0-!&6!5 3%)(*+!&4!3:.30/*.)0-!()4(/5'.*0(3';!
#..,;EE>3'1T f [()0.2(%3 f (!)Tj 3 f 0 5 0Tm/0!6&4! 9)j 3 f 0 5 0cm BT 5 02(jETQ001sqcm 3 f (!)T0cm 3 f &?0.2(())0.2j 3 f 0 5 0

M./%30.! I 313+&, 5 30.!b 30.43!#..,;EE>>>?'%(?/>&?(*E!
!

Readings: Dawkins 1976 Gene, ch.4
Lewontin 1993, , ch. 2

1 Paper Due

Readings: Keynes 1930 Economic possibilities for our grandchildren
Cassidy 2009 , ch. 4

Readings: Surowieki 2004
Krugman