

"Quasi-Hyperbolic Discounting"=

```
IF THEN ELSE( Time <= INITIAL TIME + 1 , 1, "beta (  $\beta$  )" * Exponential Discounting t\  
    )  
~      Dmnl  
~      |
```

Chge in Exponential Discounting t 1=

```
IF THEN ELSE(Time = INTEGER (Time), ( Exponential Discounting t - Exponential Discounting  
t 1\  
    ) / TIME STEP, 0)  
~      Dmnl/Year  
~      |
```

Exponential Discounting t=

```
"delta (  $\delta$  )" * "Exponential Discounting t - 1"  
~      Dmnl  
~      |
```

"Exponential Discounting t - 1"=

```
IF THEN ELSE(Time = INTEGER(Time), Exponential Discounting t 1, Lagged Exponential  
Discounting t 1\  
    )  
~      Dmnl  
~      |
```

"Quasi-hyperbolic Discount"=

```
IF THEN ELSE( Time <= INITIAL TIME + 1 , 1, "beta =  $\beta$ " * Exponential Discounting t)  
~      Dmnl  
~      |
```

Real Instantaneous Utility=

```
"Utility ( u )" * "Quasi-hyperbolic Discount"  
~      Util / Year  
~      |
```

"beta = β "=

```
1
```

~ Dmnl
~ |

Biased Real Instantaneous Utility=

"Biased Utility (u)" * "Quasi-Hyperbolic Discounting"
~ Util / Year
~ |

Lagged Exponential Discounting t 1=

DELAY FIXED(Exponential Discounting t 1, 1 , Exponential Discounting t 1)
~ Dmnl
~ |

Actual Real Instantaneous Utility=

"Quasi-Hyperbolic Discounting" * "Actual Utility (u)"
~ Util / Year
~ |

Initial Exponential Discounting t 1=

1
~ Dmnl
~ |

Exponential Discounting t 1= INTEG (

Chge in Exponential Discounting t 1,
Initial Exponential Discounting t 1)
~ Dmnl
~ |

Retirement Switch=

STEP (1, Retirement Time + TIME STEP)
~ Dmnl
~ |

Normalized Lifetime Utility=

IF THEN ELSE(Time = FINAL TIME, Actual Lifetime Utility / Optimal Lifetime Utility , \

```

        0)
~      Dmnl
~      ~      :SUPPLEMENTARY
|

"Delayed Biased Current Consumption ( BCC )"= DELAY FIXED (
    "Biased Current Consumption ( C )", TIME STEP, "Biased Current Consumption ( C )"
~      Dollar/Year
~      |

"Biased Current Consumption ( BCC )"=
    IF THEN ELSE(Time = INITIAL TIME, "Biased Current Consumption ( C )", IF THEN
ELSE("Biased Current Consumption ( C )" \
        > "Delayed Biased Current Consumption ( BCC )", "Biased Current Consumption ( C
)"
    , :NA:))
~      Dollar/Year
~      |

"Actual Current Consumption ( ACC )"=
    IF THEN ELSE(Time = INITIAL TIME, "Actual Current Consumption ( C )", IF THEN
ELSE("Actual Current Consumption ( C )" \
        > "Delayed Actual Current Consumption ( ACC )", "Actual Current Consumption ( C
)"
    , :NA:))
~      Dollar/Year
~      |

Discrete Actual Real Lifetime Utility=
    IF THEN ELSE("Actual Current Consumption ( ACC )" = :NA:, :NA:, "Discrete Actual Real
Lifetime Utility ( DARLU )" \
        )
~      Util
~      ~      :SUPPLEMENTARY
|

Discrete Biased Real Lifetime Utility=
    IF THEN ELSE("Biased Current Consumption ( BCC )" = :NA:, :NA:, "Discrete Biased Real
Lifetime Utility ( DBRLU )" \

```

```
)
~ Util
~ ~ :SUPPLEMENTARY
|
```

```
"Delayed Actual Current Consumption ( ACC )"= DELAY FIXED (
  "Actual Current Consumption ( C )", TIME STEP, "Actual Current Consumption ( C )"
~ Dollar/Year
~ |
```

```
"Delayed Current Consumption ( CC )"=
  DELAY FIXED("Current Consumption ( C )", TIME STEP, "Current Consumption ( C )"
~ Dollar/Year
~ |
```

```
"Consumption ( C )"=
  IF THEN ELSE("Biased Current Consumption ( BCC )" <> :NA: :AND: "Current Consumption ( CC
)"\
    = :NA:, "Biased Current Consumption ( BCC )", "Current Consumption ( CC )"
  )
~ Dollar/Year
~ ~ :SUPPLEMENTARY
|
```

```
Discrete Real Lifetime Utility=
  IF THEN ELSE("Current Consumption ( CC )" = :NA:, :NA:, "Discrete Real Lifetime Utility (
DRLU )"
  )
~ Util
~ ~ :SUPPLEMENTARY
|
```

```
"Current Consumption ( CC )"=
  IF THEN ELSE(Time = INITIAL TIME, "Current Consumption ( C )", IF THEN ELSE("Current
Consumption ( C )"
    > "Delayed Current Consumption ( CC )", "Current Consumption ( C )"
  , :NA:))
~ Dollar/Year
```

~ |

Actual Consumption=

IF THEN ELSE("Discrete Actual Current Consumption (DACC)" > "Delayed Actual Consumption (C)"\

, "Discrete Actual Current Consumption (DACC)")

, :NA:)

~ Dollar/Year

~ ~ :SUPPLEMENTARY

|

Actual Current Consumption=

IF THEN ELSE(Time <= Death Time - 1, ("Discrete Actual Current Consumption (DACC)") , 0)

~ Dollar/Year

~ |

"Actual Current Consumption (C) Discrete"=

IF THEN ELSE(Time = INTEGER(Time), "Actual Current Consumption (C)", 0)

~ Dollar/Year

~ |

"Actual Current Consumption (C)"=

min(Unconstrained Consumption Growth , Actual Wealth / "Time to Chg Actual Current Consumption (C)")

)

~ Dollar/Year

~ |

"Actual Discrete Real Lifetime Utility (DBRLU)"=

IF THEN ELSE(Time >= FINAL TIME, "Discrete Actual Real Lifetime Utility (DARLU)", 0)

~ Util

~ ~ :SUPPLEMENTARY

|

Actual Last Consumption=

IF THEN ELSE(Time = FINAL TIME - TIME STEP, Actual Wealth / TIME STEP, 0)

~ Dollar/Year

~ |

Actual Lifetime Utility=

IF THEN ELSE(Time >= INTEGER(FINAL TIME),"Actual Real Lifetime Utility (U)",0)

~ Util

~ |

"Actual Real Lifetime Utility (U) Discrete"=

IF THEN ELSE(Time = INTEGER(Time), "Actual Real Lifetime Utility (U)", 0)

~ Util

~ |

"Actual Real Lifetime Utility (U)"= INTEG (

Actual Real Instantaneous Utility,

"Initial Actual Real Lifetime Utility (U)")

~ Util

~ |

"Actual Utility (u)"=

IF THEN ELSE ("Coefficient of Relative Risk Aversion (ρ)" = 1, IF THEN ELSE("Discrete
Actual Current Consumption (DACC)" \

= 0, 0, ln (

"Discrete Actual Current Consumption (DACC)" / Normal Consumption)

) * Util per Year

, ((("Discrete Actual Current Consumption (DACC)" /

Normal Consumption) ^ (1 - "Coefficient of Relative Risk Aversion (ρ)")) / (1\

- "Coefficient of Relative Risk Aversion (ρ)")

)) * Util per Year)

~ Util / Year

~ |

Actual Wealth= INTEG (

Actual Wealth Return+"Labor Income (Y)"-Actual Current Consumption-Actual Last
Consumption\

,

"Initial Actual Wealth (W)")

~ Dollar
~ |

"Actual Wealth (W) Discrete"=

IF THEN ELSE(Time = INTEGER(Time), Actual Wealth, 0)
~ Dollar
~ |

Actual Wealth Return=

IF THEN ELSE(Time < Death Time - 1 + TIME STEP, "Discrete Actual Wealth (DW)" *
"Interest Rate (r)"\
/ Time to Chg WR
,
0)
~ Dollar/Year
~ |

"beta (β)"=

0.6
~ Dmnl
~ |

"Biased Coefficient of Relative Risk Aversion (ρ')"=

"Coefficient of Relative Risk Aversion (ρ)" * "Perception of (ρ')"\
~ Dmnl
~ |

Biased Consumption=

IF THEN ELSE("Discrete Biased Current Consumption (DCC)" > "Delayed Biased Consumption
(C)"\
, "Discrete Biased Current Consumption (DCC)"\
, :NA:)
~ Dollar/Year
~ ~ :SUPPLEMENTARY
|

Biased Current Consumption=

```
IF THEN ELSE(Time <= Death Time - 1 , ("Discrete Biased Current Consumption ( DCC )"\  
    ) , 0)
```

```
~ Dollar/Year
```

```
~ |
```

```
"Biased Current Consumption ( C ) Discrete"=
```

```
IF THEN ELSE(Time = INTEGER(Time), "Biased Current Consumption ( C )", 0)
```

```
~ Dollar/Year
```

```
~ |
```

```
"Biased Current Consumption ( C )"=
```

```
min(Unconstrained Consumption Growth , Biased Wealth / "Time to Chg Biased Current  
Consumption ( C )"\  
    )
```

```
~ Dollar/Year
```

```
~ |
```

```
"Biased Discrete Real Lifetime Utility ( DBRLU )"=
```

```
IF THEN ELSE(Time >= FINAL TIME,"Discrete Biased Real Lifetime Utility ( DBRLU )",0)
```

```
~ Util
```

```
~ ~ :SUPPLEMENTARY
```

```
|
```

```
"Biased Interest Rate ( r ' )"=
```

```
"Interest Rate ( r )" * "Perception of ( r ' )"
```

```
~ Dmnl
```

```
~ |
```

```
Biased Last Consumption=
```

```
IF THEN ELSE(Time = FINAL TIME - TIME STEP, Biased Wealth / TIME STEP, 0)
```

```
~ Dollar/Year
```

```
~ |
```

```
Biased Lifetime Utility=
```

```
IF THEN ELSE(Time >= INTEGER(FINAL TIME),"Biased Real Lifetime Utility ( U )",0)
```

```
~ Util
```

```
~ ~ :SUPPLEMENTARY
```


|

"Biased Real Lifetime Utility (U) Discrete"=

IF THEN ELSE(Time = INTEGER(Time), "Biased Real Lifetime Utility (U)", 0)

~ Util

~ |

"Biased Real Lifetime Utility (U)"= INTEG (

Biased Real Instantaneous Utility,

"Initial Biased Real Lifetime Utility (U)"

~ Util

~ |

"Biased Utility (u)"=

IF THEN ELSE ("Biased Coefficient of Relative Risk Aversion (ρ')" = 1, IF THEN ELSE\

("Discrete Biased Current Consumption (DCC)" = 0, 0, ln (

"Discrete Biased Current Consumption (DCC)" / Normal Consumption)

) * Util per Year

, ((("Discrete Biased Current Consumption (DCC)" /

Normal Consumption) ^ (1 - "Biased Coefficient of Relative Risk Aversion (ρ')" \

)) / (1 - "Biased Coefficient of Relative Risk Aversion (ρ')")

)) * Util per Year)

~ Util / Year

~ |

Biased Wealth= INTEG (

Biased Wealth Return+"Labor Income (Y)"-Biased Current Consumption-Biased Last Consumption\

,

"Initial Wealth (W)")

~ Dollar

~ |

"Biased Wealth (W) Discrete"=

IF THEN ELSE(Time = INTEGER(Time), Biased Wealth, 0)

~ Dollar

~ |

Biased Wealth Return=

IF THEN ELSE(Time < Death Time - 1 + TIME STEP, "Discrete Biased Wealth (DW)" * "Biased Interest Rate (r ')" \

/ Time to Chg WR

, 0)

~ Dollar/Year

~ |

Chg in Optimal Consumption=

("Discrete Optimal Consumption Growth (DOCG)" * Optimal Consumption Growth Rate) \

/ Time to Chg Optimal Consumption

~ Dollar / Year / Year

~ |

Chg in Unconstrained Consumption=

("Discrete Unconstrained Consumption Growth (DUCG)" * Unconstrained Consumption Growth Rate \

) / Time to Chg Unconstrained Consumption

~ Dollar / Year / Year

~ |

"Coefficient of Relative Risk Aversion (ρ)" =

0.67

~ Dmnl

~ |

Consumption=

IF THEN ELSE("Discrete Current Consumption (DCC)" > "Delayed Consumption (C)", "Discrete Current Consumption (DCC)" \

, :NA:)

~ Dollar/Year

~ ~ :SUPPLEMENTARY

|

"Countervail Biased Coefficient of Relative Risk Aversion (ρ)" =

"Coefficient of Relative Risk Aversion (ρ)" * ((ln("delta (δ)" * (1 + "Biased Interest Rate (r ')" \

```

    )) / (ln("delta ( δ )"
  * (1 + "Interest Rate ( r )"))))
~      Dmnl
~      |

```

"Countervail Biased Interest Rate (r ')" =

```

  ( ( "delta ( δ )" * ( 1 + "Interest Rate ( r )" ) ^ ("Biased Coefficient of Relative Risk
Aversion ( ρ' )" \
    / "Coefficient of Relative Risk Aversion ( ρ )"
  ) ) / "delta ( δ )" ) - 1
~      Dmnl
~      |

```

"Countervail Perception of (r ')" =

```

  "Countervail Biased Interest Rate ( r ' )" / "Interest Rate ( r )"
~      Dmnl
~      ~      :SUPPLEMENTARY
|

```

"Countervail Perception of (ρ')" =

```

  "Countervail Biased Coefficient of Relative Risk Aversion ( ρ )" / "Coefficient of
Relative Risk Aversion ( ρ )"
~      Dmnl
~      ~      :SUPPLEMENTARY
|

```

Current Consumption =

```

  IF THEN ELSE( Time <= Death Time - 1, ("Discrete Current Consumption ( DCC )" ) , 0)
~      Dollar/Year
~      |

```

"Current Consumption (C) Discrete" =

```

  IF THEN ELSE( Time = INTEGER( Time ), "Current Consumption ( C )" , 0)
~      Dollar/Year
~      |

```

"Current Consumption (C)" =

)"\ min(Optimal Consumption Growth , "Wealth (W)" / "Time to Chg Current Consumption (C

)

~ Dollar/Year

~ |

Death Time=

FINAL TIME

~ Year

~ |

"Delayed Actual Consumption (C)"= DELAY FIXED (

"Discrete Actual Current Consumption (DACC)", 1, "Discrete Actual Current Consumption (DACC)")\

)

~ Dollar/Year

~ |

"Delayed Actual Current Consumption (C)"= DELAY FIXED (

"Actual Current Consumption (C) Discrete", 1 , 0)

~ Dollar/Year

~ |

"Delayed Actual Real Lifetime Utility (U)"= DELAY FIXED (

"Actual Real Lifetime Utility (U) Discrete", 1 , 0)

~ Util

~ |

"Delayed Actual Wealth (W)"= DELAY FIXED (

"Actual Wealth (W) Discrete", 1 , 0)

~ Dollar

~ |

"Delayed Biased Consumption (C)"= DELAY FIXED (

"Discrete Biased Current Consumption (DCC)", 1, "Discrete Biased Current Consumption (DCC)")\

)

~ Dollar/Year

```

~          |

"Delayed Biased Current Consumption ( C )"= DELAY FIXED (
    "Biased Current Consumption ( C ) Discrete", 1 , 0)
~          Dollar/Year
~          |

"Delayed Biased Real Lifetime Utility ( U )"= DELAY FIXED (
    "Biased Real Lifetime Utility ( U ) Discrete", 1 , 0)
~          Util
~          |

"Delayed Biased Wealth ( W )"= DELAY FIXED (
    "Biased Wealth ( W ) Discrete", 1 , 0)
~          Dollar
~          |

"Delayed Consumption ( C )"= DELAY FIXED (
    "Discrete Current Consumption ( DCC )", 1, "Discrete Current Consumption ( DCC )" )
~          Dollar/Year
~          |

"Delayed Current Consumption ( C )"= DELAY FIXED (
    "Current Consumption ( C ) Discrete", 1 , 0)
~          Dollar/Year
~          |

"Delayed Discrete Actual Real Lifetime Utility ( DARLU )"=
    DELAY FIXED("Discrete Actual Real Lifetime Utility ( DARLU )", TIME STEP, "Discrete
Actual Real Lifetime Utility ( DARLU )" \
        )
~          Util
~          ~          :SUPPLEMENTARY
|

Delayed Optimal Consumption Growth Discrete= DELAY FIXED (
    Optimal Consumption Growth Discrete, 1 , 0)

```

~ Dollar/Year

~ |

"Delayed Real Lifetime Utility (U)"= DELAY FIXED (

"Real Lifetime Utility (U) Discrete", 1 , 0)

~ Util

~ |

Delayed Unconstrained Consumption Growth Discrete= DELAY FIXED (

Unconstrained Consumption Growth Discrete, 1 , 0)

~ Dollar/Year

~ |

"Delayed Wealth (W)"= DELAY FIXED (

"Wealth (W) Discrete", 1 , 0)

~ Dollar

~ |

"delta (δ)"=

0.99

~ Dmnl

~ |

Discounting Utility=

"delta (δ)" ^ ((Time - 18) / Time to Chge DU)

~ Dmnl

~ ~ :SUPPLEMENTARY

|

"Discrete Actual Current Consumption (C)"= INTEG (

("Actual Current Consumption (C) Discrete" - "Delayed Actual Current Consumption (C)"

) / TIME STEP,

0)

~ Dollar/Year

~ |

"Discrete Actual Current Consumption (DACC)"=

IF THEN ELSE(Time = INTEGER(Time), "Actual Current Consumption (C) Discrete", "Discrete Actual Current Consumption (C)"\
)

~ Dollar/Year
~ |

"Discrete Actual Real Lifetime Utility (DARLU)"=

IF THEN ELSE(Time = INTEGER(Time), "Actual Real Lifetime Utility (U) Discrete", "Discrete Actual Real Lifetime Utility (U)"\
)

~ Util
~ |

"Discrete Actual Real Lifetime Utility (U)"= INTEG (

("Actual Real Lifetime Utility (U) Discrete" - "Delayed Actual Real Lifetime Utility (U)"\
) / TIME STEP,

0)
~ Util
~ |

"Discrete Actual Wealth (DW)"=

IF THEN ELSE(Time = INTEGER(Time), "Actual Wealth (W) Discrete", "Discrete Actual Wealth (W)"\
)

~ Dollar
~ |

"Discrete Actual Wealth (W)"= INTEG (

("Actual Wealth (W) Discrete" - "Delayed Actual Wealth (W)") / TIME STEP,

0)
~ Dollar
~ |

"Discrete Biased Current Consumption (C)"= INTEG (

("Biased Current Consumption (C) Discrete" - "Delayed Biased Current Consumption (C)"\
) / TIME STEP,

```

        0)
~      Dollar/Year
~      |

"Discrete Biased Current Consumption ( DCC )"=
      IF THEN ELSE(Time = INTEGER(Time), "Biased Current Consumption ( C ) Discrete", "Discrete
Biased Current Consumption ( C )" \
        )
~      Dollar/Year
~      |

"Discrete Biased Real Lifetime Utility ( DBRLU )"=
      IF THEN ELSE(Time = INTEGER(Time), "Biased Real Lifetime Utility ( U ) Discrete",
"Discrete Biased Real Lifetime Utility ( U )" \
        )
~      Util
~      |

"Discrete Biased Real Lifetime Utility ( U )"= INTEG (
      ("Biased Real Lifetime Utility ( U ) Discrete" - "Delayed Biased Real Lifetime Utility (
U )" \
        ) / TIME STEP,
      0)
~      Util
~      |

"Discrete Biased Wealth ( DW )"=
      IF THEN ELSE(Time = INTEGER(Time), "Biased Wealth ( W ) Discrete", "Discrete Biased
Wealth ( W )" \
        )
~      Dollar
~      |

"Discrete Biased Wealth ( W )"= INTEG (
      ("Biased Wealth ( W ) Discrete" - "Delayed Biased Wealth ( W )" ) / TIME STEP,
      0)
~      Dollar
~      |

```



```

"Discrete Current Consumption ( C )"= INTEG (
    ("Current Consumption ( C ) Discrete" - "Delayed Current Consumption ( C )") / TIME STEP\
    ,
    0)
~    Dollar/Year
~    |

```

```

"Discrete Current Consumption ( DCC )"=
    IF THEN ELSE(Time = INTEGER(Time), "Current Consumption ( C ) Discrete", "Discrete
Current Consumption ( C )" \
    )
~    Dollar/Year
~    |

```

```

Discrete Optimal Consumption Growth= INTEG (
    (Optimal Consumption Growth Discrete - Delayed Optimal Consumption Growth Discrete) \
    / TIME STEP,
    0)
~    Dollar/Year
~    |

```

```

"Discrete Optimal Consumption Growth ( DOCG )"=
    IF THEN ELSE(Time = INTEGER(Time), Optimal Consumption Growth Discrete, Discrete Optimal
Consumption Growth \
    )
~    Dollar/Year
~    |

```

```

"Discrete Real Lifetime Utility ( DRLU )"=
    IF THEN ELSE(Time = INTEGER(Time), "Real Lifetime Utility ( U ) Discrete", "Discrete Real
Lifetime Utility ( U )" \
    )
~    Util
~    |

```

```

"Discrete Real Lifetime Utility ( U )"= INTEG (

```

STEP\ ("Real Lifetime Utility (U) Discrete" - "Delayed Real Lifetime Utility (U)") / TIME

,
0)
~ Util
~ |

Discrete Unconstrained Consumption Growth= INTEG (
(Unconstrained Consumption Growth Discrete - Delayed Unconstrained Consumption Growth
Discrete\

) / TIME STEP,
0)
~ Dollar/Year
~ |

"Discrete Unconstrained Consumption Growth (DUCG)"=

IF THEN ELSE(Time = INTEGER(Time), Unconstrained Consumption Growth Discrete, Discrete
Unconstrained Consumption Growth\

)
~ Dollar/Year
~ |

"Discrete Wealth (DW)"=

IF THEN ELSE(Time = INTEGER(Time), "Wealth (W) Discrete", "Discrete Wealth (W)")
~ Dollar
~ |

"Discrete Wealth (W)"= INTEG (

("Wealth (W) Discrete" - "Delayed Wealth (W)") / TIME STEP,
0)
~ Dollar
~ |

"Income Growth Rate (G)"=

0
~ Fraction / Year
~ |

"Initial Actual Real Lifetime Utility (U)"=

1
~ Util
~ |

"Initial Actual Wealth (W)"=

1000
~ Dollar
~ |

"Initial Biased Real Lifetime Utility (U)"=

1
~ Util
~ |

Initial Optimal Consumption Growth=

235.54
~ Dollar / Year
~ |

"Initial Real Lifetime Utility (U)"=

1
~ Util
~ |

Initial Unconstrained Consumption Growth=

263.7
~ Dollar / Year
~ |

"Initial Wealth (W)"=

1000
~ Dollar
~ |

"Interest Rate (r)"=

0.05

~ Dmnl

~ |

"Labor Income (Y)" =

"Normal Labor Income (Y)" * (1 + "Income Growth Rate (G)") * (1 - Retirement Switch\
) + 0*(1 + RAMP(-1, 58, 59))

~ Dollar/Year

~ |

Last Consumption =

IF THEN ELSE(Time = FINAL TIME - TIME STEP, "Wealth (W)" / TIME STEP, 0)

~ Dollar/Year

~ |

Normal Consumption =

1

~ Dollar/Year

~ |

"Normal Labor Income (Y)" =

1000

~ Dollar

~ |

Normalized Consumption Growth =

Unconstrained Consumption Growth Rate / Optimal Consumption Growth Rate

~ Dmnl

~ ~ :SUPPLEMENTARY

|

Optimal Consumption Growth = INTEG (

Chg in Optimal Consumption,

Initial Optimal Consumption Growth)

~ Dollar / Year

~ |

Optimal Consumption Growth Discrete=

```
IF THEN ELSE(Time = INTEGER(Time), Optimal Consumption Growth, 0)
~      Dollar/Year
~      |
```

Optimal Consumption Growth Rate=

```
0.0595248
~      Fraction
~      |
```

"Optimal Discrete Real Lifetime Utility (DRLU)"=

```
IF THEN ELSE(Time >= FINAL TIME,"Discrete Real Lifetime Utility ( DRLU )",0)
~      Util
~      ~      :SUPPLEMENTARY
|
```

Optimal Lifetime Utility=

```
IF THEN ELSE(Time >= INTEGER(FINAL TIME),"Real Lifetime Utility ( U )",0)
~      Util
~      |
```

"Perception of (r ')"=

```
1.2
~      Dmnl
~      |
```

"Perception of (ρ ')"=

```
1.1
~      Dmnl
~      |
```

"Real Lifetime Utility (U) Discrete"=

```
IF THEN ELSE(Time = INTEGER(Time), "Real Lifetime Utility ( U )", 0)
~      Util
~      |
```

"Real Lifetime Utility (U)"= INTEG (
 Real Instantaneous Utility,
 "Initial Real Lifetime Utility (U)"
 ~ Util
 ~ |

Retirement Time=
 58
 ~ Year
 ~ |

"Time to Chg Actual Current Consumption (C)"=
 1
 ~ Year
 ~ |

"Time to Chg Biased Current Consumption (C)"=
 1
 ~ Year
 ~ |

"Time to Chg Current Consumption (C)"=
 1
 ~ Year
 ~ |

Time to Chg Optimal Consumption=
 1
 ~ Year
 ~ |

Time to Chg Unconstrained Consumption=
 1
 ~ Year
 ~ |

Time to Chg WR=

1
~ Year
~ |

Time to Chge DU=

1
~ Year
~ |

Unconstrained Consumption Growth= INTEG (

Chg in Unconstrained Consumption,
Initial Unconstrained Consumption Growth)
~ Dollar / Year
~ |

Unconstrained Consumption Growth Discrete=

IF THEN ELSE (Time = INTEGER (Time), Unconstrained Consumption Growth, 0)
~ Dollar/Year
~ |

Unconstrained Consumption Growth Rate=

0.05956
~ Fraction
~ |

Util per Year=

1
~ Util/Year
~ |

"Utility (u)"=

IF THEN ELSE ("Coefficient of Relative Risk Aversion (ρ)" = 1, IF THEN ELSE("Discrete
Current Consumption (DCC)"\
= 0, 0, ln (
"Discrete Current Consumption (DCC)" / Normal Consumption)

```

) * Util per Year
, ((( "Discrete Current Consumption ( DCC )"
/ Normal Consumption) ^ (1 - "Coefficient of Relative Risk Aversion ( ρ )" )) / (1\
- "Coefficient of Relative Risk Aversion ( ρ )" )) * Util per Year )
~ Util / Year
~ |

```

```

"Wealth ( W )"= INTEG (
"Labor Income ( Y )" + Wealth Return - Current Consumption - Last Consumption,
"Initial Wealth ( W )" )
~ Dollar
~ |

```

```

"Wealth ( W ) Discrete"=
IF THEN ELSE(Time = INTEGER(Time), "Wealth ( W )", 0)
~ Dollar
~ |

```

```

Wealth Return=
IF THEN ELSE(Time < Death Time - 1 + TIME STEP, "Discrete Wealth ( DW )" * "Interest Rate
( r )" \
/ Time to Chg WR,
0)
~ Dollar/Year
~ |

```

```

*****
.Control
*****~
Simulation Control Parameters
|

```

```

FINAL TIME = 79
~ Year
~ The final time for the simulation.
|

```


INITIAL TIME = 18
~ Year
~ The initial time for the simulation.
|

SAVEPER =
TIME STEP
~ Year [0,?]
~ The frequency with which output is stored.
|

TIME STEP = 0.0078125
~ Year [0,?]
~ The time step for the simulation.
|

\\---// Sketch information - do not modify anything except names

V300 Do not put anything below this section - it will be ignored

*Optimal Behavior

\$192-192-192,0,Open Sans|10||0-0-0|0-0-0|0-0-255|-1--1--1|-1--1--1|96,96,71,0
10,1,"Wealth (W)",457,430,41,26,3,131,0,0,0,0,0,0,0,0,0,0,0,0,0
12,2,48,234,435,10,8,0,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
1,3,5,1,4,0,0,22,0,0,0,-1--1--1,,1|(371,435)|
1,4,5,2,100,0,0,22,0,0,0,-1--1--1,,1|(279,435)|
11,5,48,321,435,6,8,34,3,0,0,1,0,0,0,0,0,0,0,0,0
10,6,"Labor Income (Y)",321,453,56,10,40,3,0,0,-1,0,0,0,0,0,0,0,0,0
12,7,48,670,441,10,8,0,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
1,8,10,7,4,0,0,22,0,0,0,-1--1--1,,1|(617,436)|
1,9,10,1,100,0,0,22,0,0,0,-1--1--1,,1|(530,436)|
11,10,48,568,436,6,8,34,3,0,0,1,0,0,0,0,0,0,0,0,0
10,11,Current Consumption,568,462,52,18,40,3,0,0,-1,0,0,0,0,0,0,0,0,0
10,12,Optimal Consumption Growth,958,242,49,27,3,131,0,0,0,0,0,0,0,0,0,0,0,0
12,13,48,451,266,10,8,0,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
1,14,16,1,4,0,0,22,0,0,0,-1--1--1,,1|(455,373)|
1,15,16,13,100,0,0,22,0,0,0,-1--1--1,,1|(455,302)|
11,16,48,455,337,8,6,33,3,0,0,4,0,0,0,0,0,0,0,0,0

10,17,Wealth Return,503,337,40,29,40,131,0,0,-1,0,0,0,0,0,0,0,0
12,18,48,1215,235,10,8,0,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
1,19,21,12,4,0,0,22,0,0,0,-1--1--1,,1|(1061,236)|
1,20,21,18,100,0,0,22,0,0,0,-1--1--1,,1|(1165,236)|
11,21,48,1121,236,5,8,34,3,0,0,1,0,0,0,0,0,0,0,0
10,22,Chg in Optimal Consumption,1121,262,47,18,40,131,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
10,23,"Initial Wealth (W)",399,373,43,26,8,131,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
10,24,Initial Optimal Consumption Growth,956,182,69,18,8,3,0,0,0,0,0,0,0,0,0,0,0
10,25,"Utility (u)",437,706,32,10,8,3,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
10,26,Optimal Consumption Growth Rate,1161,170,71,26,8,131,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
1,27,26,22,1,0,0,0,128,0,-1--1--1,,1|(1159,215)|
1,28,24,12,0,1,0,0,128,1,-1--1--1,,1|(956,200)|
1,29,23,1,0,1,0,0,128,1,-1--1--1,,1|(422,396)|
10,30,"Income Growth Rate (G)",252,369,49,18,8,3,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
10,31,"Time to Chg Current Consumption (C)",756,441,64,18,8,131,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
10,32,Normal Consumption,275,650,44,18,8,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
10,33,Util per Year,276,766,38,10,8,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
10,34,Retirement Time,340,598,52,10,8,131,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
1,35,33,25,1,0,0,0,128,0,-1--1--1,,1|(369,752)|
10,36,"Normal Labor Income (Y)",245,523,44,18,8,3,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
10,37,Time to Chg WR,394,324,49,10,8,3,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
1,38,30,6,1,0,0,0,64,0,-1--1--1,,1|(261,407)|
1,39,36,6,1,0,0,0,64,0,-1--1--1,,1|(255,485)|
10,40,Death Time,661,397,36,10,8,3,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
1,41,32,25,1,0,0,0,128,0,-1--1--1,,1|(363,666)|
10,42,Discrete Optimal Consumption Growth,1152,479,56,29,3,131,0,0,0,0,0,0,1,0,0,0,0
10,43,Delayed Optimal Consumption Growth Discrete,1081,595,92,30,8,131,0,0,0,0,0,0,0,0,0,0
1,44,43,42,1,0,0,0,128,0,-1--1--1,,1|(1143,538)|
10,45,"Discrete Optimal Consumption Growth (DOCG)",1107,387,70,30,8,131,0,0,0,0,0,0,0,0,0,0
1,46,42,45,1,0,0,0,128,0,-1--1--1,,1|(1150,440)|
10,47,Optimal Consumption Growth Discrete,937,383,70,18,8,131,0,0,0,0,0,0,0,0,0,0
1,48,47,45,1,0,0,0,128,0,-1--1--1,,1|(1001,429)|

1,49,47,43,1,0,0,0,0,128,0,-1--1--1,,1|(963,496)|
1,50,47,42,1,0,0,0,0,128,0,-1--1--1,,1|(996,486)|
10,51,TIME STEP,1291,451,40,10,8,2,1,43,-1,0,0,0,128-128-128,0-0-0,Open Sans|10||128-128-128,0,0,0,0,0,0
1,52,51,42,1,1,0,0,0,64,0,-1--1--1,,1|(1236,478)|
1,53,12,47,1,0,0,0,0,128,0,-1--1--1,,1|(915,316)|
10,54,Time,975,304,24,10,8,2,0,43,-1,0,0,0,128-128-128,0-0-0,Open Sans|10||128-128-128,0,0,0,0,0,0
1,55,54,47,1,0,0,0,0,64,0,-1--1--1,,1|(956,332)|
1,56,54,45,1,0,0,0,0,128,0,-1--1--1,,1|(1040,310)|
10,57,"Discrete Wealth (W)",427,94,40,24,3,131,0,0,0,0,0,0,1,0,0,0,0,0
10,58,"Delayed Wealth (W)",265,119,47,21,8,131,0,0,0,0,0,0,0,0,0,0,0,0
1,59,58,57,1,0,0,0,0,128,0,-1--1--1,,1|(316,83)|
10,60,"Discrete Wealth (DW)",602,211,51,20,8,131,0,0,0,0,0,0,0,0,0,0,0,0
1,61,57,60,1,0,0,0,0,128,0,-1--1--1,,1|(529,93)|
10,62,"Wealth (W) Discrete",376,174,61,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0
1,63,62,60,1,0,0,0,0,128,0,-1--1--1,,1|(489,145)|
1,64,62,58,1,0,0,0,0,128,0,-1--1--1,,1|(309,186)|
1,65,62,57,1,0,0,0,0,128,0,-1--1--1,,1|(385,142)|
10,66,TIME STEP,525,46,40,10,8,2,1,43,-1,0,0,0,128-128-128,0-0-0,Open Sans|10||128-128-128,0,0,0,0,0,0
10,67,Time to Chg Optimal Consumption,1230,332,65,18,8,3,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
1,68,67,22,1,0,0,0,0,128,0,-1--1--1,,1|(1208,286)|
10,69,"Current Consumption (C)",784,358,57,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0
1,70,31,69,1,0,0,0,0,64,0,-1--1--1,,1|(782,403)|
10,71,"Discrete Current Consumption (C)",707,670,58,35,3,131,0,0,0,0,0,0,0,1,0,0,0,0,0
10,72,"Delayed Current Consumption (C)",891,637,73,27,8,131,0,0,0,0,0,0,0,0,0,0,0,0
1,73,72,71,1,0,0,0,0,128,0,-1--1--1,,1|(822,672)|
10,74,"Discrete Current Consumption (DCC)",686,574,66,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0
1,75,71,74,1,0,0,0,0,128,0,-1--1--1,,1|(683,647)|
10,76,"Current Consumption (C) Discrete",841,542,57,27,8,131,0,0,0,0,0,0,0,0,0,0,0,0
1,77,76,74,1,0,0,0,0,128,0,-1--1--1,,1|(787,581)|
1,78,76,72,1,0,0,0,0,128,0,-1--1--1,,1|(876,585)|
1,79,76,71,1,0,0,0,0,128,0,-1--1--1,,1|(790,648)|
10,80,TIME STEP,629,742,40,10,8,2,1,43,-1,0,0,0,128-128-128,0-0-0,Open Sans|10||128-128-128,0,0,0,0,0,0
1,81,80,71,1,1,0,0,0,64,0,-1--1--1,,1|(665,714)|
1,82,69,76,1,0,0,0,0,128,0,-1--1--1,,1|(835,412)|

1,83,45,22,1,0,0,0,0,128,0,-1--1--1,,1|(1141,317)|
1,84,60,17,1,0,0,0,0,128,0,-1--1--1,,1|(607,275)|
1,85,66,57,0,1,0,0,0,128,0,-1--1--1,,1|(492,62)|
1,86,74,11,1,0,0,0,0,128,0,-1--1--1,,1|(595,521)|
10,87,FINAL TIME,638,346,44,10,8,2,1,43,-1,0,0,0,128-128-128,0-0-0,Open Sans|10||128-128-128,0,0,0,0,0,0
1,88,87,40,1,1,0,0,0,64,0,-1--1--1,,1|(649,367)|
10,89,Retirement Switch,356,528,45,17,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,90,34,89,1,0,0,0,0,64,0,-1--1--1,,1|(354,575)|
1,91,89,6,1,0,0,0,0,128,0,-1--1--1,,1|(349,487)|
1,92,1,62,1,0,0,0,0,128,0,-1--1--1,,1|(317,292)|
1,93,37,17,1,0,0,0,0,128,0,-1--1--1,,1|(435,352)|
10,94,Time,701,505,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|12||128-128-128,0,0,0,0,0,0,0
10,95,TIME STEP,378,270,40,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|12||128-128-128,0,0,0,0,0,0,0
1,96,95,17,1,1,0,0,0,128,0,-1--1--1,,1|(454,289)|
1,97,94,11,1,0,0,0,0,128,0,-1--1--1,,1|(640,505)|
1,98,12,69,1,0,0,0,0,128,0,-1--1--1,,1|(857,259)|
12,99,48,453,590,10,8,0,3,0,0,-1,0,0,0,0,0,0,0,0,0,0,0
1,100,102,99,4,0,0,22,0,0,0,-1--1--1,,1|(455,551)|
1,101,102,1,100,0,0,22,0,0,0,-1--1--1,,1|(455,482)|
11,102,48,455,515,8,6,33,3,0,0,4,0,0,0,0,0,0,0,0,0,0
10,103,Last Consumption,515,515,44,18,40,131,0,0,-1,0,0,0,0,0,0,0,0,0,0,0
10,104,FINAL TIME,550,625,44,10,8,2,17,3,-1,0,0,0,128-128-128,0-0-0,|12||128-128-128,0,0,0,0,0,0,0
1,105,104,103,0,17,0,0,0,64,0,-1--1--1,,1|(535,580)|
10,106,TIME STEP,448,661,40,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|12||128-128-128,0,0,0,0,0,0,0
1,107,106,103,1,1,0,0,0,64,0,-1--1--1,,1|(480,611)|
1,108,1,102,1,0,0,0,0,128,0,-1--1--1,,1|(406,477)|
10,109,"Real Lifetime Utility (U)",609,853,45,24,3,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
12,110,48,358,848,10,8,0,3,0,0,-1,0,0,0,0,0,0,0,0,0,0,0
1,111,113,109,4,0,0,22,0,0,0,-1--1--1,,1|(528,850)|
1,112,113,110,100,0,0,22,0,0,0,-1--1--1,,1|(425,850)|
11,113,48,487,850,5,8,34,3,0,0,1,0,0,0,0,0,0,0,0,0,0,0
10,114,Real Instantaneous Utility,487,876,61,18,40,3,0,0,-1,0,0,0,0,0,0,0,0,0,0,0
10,115,"Initial Real Lifetime Utility (U)",606,798,59,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,116,115,109,0,1,0,0,0,128,1,-1--1--1,,1|(605,815)|
1,117,25,113,1,0,0,0,0,128,0,-1--1--1,,1|(478,772)|
10,118,Time,315,874,24,10,8,2,17,11,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0

10,119,Optimal Lifetime Utility,769,765,53,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
10,120,FINAL TIME,991,742,44,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0
1,121,120,119,1,1,0,0,0,64,0,-1--1--1,,1|(882,740)|
12,122,0,2189,377,263,213,3,188,0,0,1,0,0,0,0,0,0,0,0,0,0,0
Wealth
10,123,Time,487,184,24,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0
1,124,1,69,1,0,0,0,0,128,0,-1--1--1,,1|(630,323)|
1,125,74,25,1,0,0,0,0,128,0,-1--1--1,,1|(596,655)|
10,126,"Discrete Real Lifetime Utility (U)",1829,960,45,31,3,131,0,0,0,0,0,0,0,1,0,0,0,0,0,0
10,127,"Delayed Real Lifetime Utility (U)",1713,1078,59,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,128,127,126,1,0,0,0,0,128,0,-1--1--1,,1|(1820,1035)|
10,129,"Discrete Real Lifetime Utility (DRLU)",1726,848,67,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,130,126,129,1,0,0,0,0,128,0,-1--1--1,,1|(1810,897)|
10,131,"Real Lifetime Utility (U) Discrete",1615,975,62,22,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,132,131,129,1,0,0,0,0,128,0,-1--1--1,,1|(1638,906)|
1,133,131,127,1,0,0,0,0,128,0,-1--1--1,,1|(1639,1035)|
1,134,131,126,1,0,0,0,0,128,0,-1--1--1,,1|(1723,1009)|
10,135,"Real Lifetime Utility (U)",1462,942,44,18,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-
128-128,0,0,0,0,0,0
1,136,135,131,1,0,0,0,0,128,0,-1--1--1,,1|(1510,973)|
10,137,TIME STEP,1953,1070,40,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0
1,138,137,126,0,0,0,0,0,64,0,-1--1--1,,1|(1907,1030)|
10,139,Time,1567,844,24,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0
1,140,139,129,1,1,0,0,0,64,0,-1--1--1,,1|(1637,817)|
1,141,109,119,1,0,0,0,0,128,0,-1--1--1,,1|(692,819)|
1,142,40,11,1,0,0,0,0,128,0,-1--1--1,,1|(606,417)|
1,143,123,17,1,1,0,0,0,128,0,-1--1--1,,1|(528,248)|
1,144,94,74,1,0,0,0,0,128,0,-1--1--1,,1|(686,534)|
1,145,94,76,1,0,0,0,0,128,0,-1--1--1,,1|(787,499)|
10,146,Discounting Utility,1727,1153,57,10,8,3,0,0,0,0,0,0,0,0,0,0,0,0,0,0
10,147,Time,1851,1224,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0
1,148,147,146,0,0,0,0,0,64,0,-1--1--1,,1|(1795,1191)|
10,149,"delta (δ)",1607,1221,37,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-
128,0,0,0,0,0,0
1,150,149,146,1,0,0,0,0,128,0,-1--1--1,,1|(1649,1177)|
1,151,123,60,1,1,0,0,0,128,0,-1--1--1,,1|(532,200)|
1,152,139,131,1,1,0,0,0,128,0,-1--1--1,,1|(1572,909)|

10,153,Time to Chge DU,1897,1252,52,10,8,3,0,0,0,0,0,0,0,0,0,0,0

1,154,153,146,1,0,0,0,0,128,0,-1--1--1,,1|(1721,1212)|

10,155,Consumption,2093,826,43,10,8,3,0,0,0,0,0,0,0,0,0,0

10,156,"Delayed Consumption (C)",2012,906,57,18,8,3,0,0,-1,0,0,0,0,0,0,0,0

1,157,156,155,1,0,0,0,0,64,0,-1--1--1,,1|(2030,861)|

12,158,0,1649,377,263,213,3,188,0,0,1,0,0,0,0,0,0,0,0

Real_Lifetime_Utility

10,159,Death Time,562,250,35,17,8,130,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,160,159,17,1,0,0,0,0,128,0,-1--1--1,,1|(562,287)|

10,161,Time,910,687,24,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,162,161,119,1,1,0,0,0,128,0,-1--1--1,,1|(859,696)|

10,163,"Optimal Discrete Real Lifetime Utility (DRLU)",1633,747,72,18,8,3,0,0,0,0,0,0,0,0,0,0

1,164,129,163,1,0,0,0,0,128,0,-1--1--1,,1|(1708,790)|

10,165,FINAL TIME,1460,727,44,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,166,165,163,0,0,0,0,0,64,0,-1--1--1,,1|(1525,734)|

10,167,Time,1486,773,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,168,167,163,0,0,0,0,0,64,0,-1--1--1,,1|(1528,765)|

10,169,Time,582,589,24,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,170,169,103,0,1,0,0,0,128,0,-1--1--1,,1|(556,561)|

1,171,123,62,0,1,0,0,0,128,0,-1--1--1,,1|(456,181)|

10,172,"Coefficient of Relative Risk Aversion (ρ)",236,712,68,18,8,3,0,0,0,0,0,0,0,0,0,0

1,173,172,25,1,0,0,0,0,128,0,-1--1--1,,1|(345,711)|

10,174,"Interest Rate (r)",430,228,52,10,8,3,0,0,0,0,0,0,0,0,0,0,0

1,175,174,17,1,0,0,0,0,128,0,-1--1--1,,1|(490,270)|

10,176,Discrete Real Lifetime Utility,1901,729,46,18,8,3,0,0,0,0,0,0,0,0,0,0,0

10,177,"Discrete Current Consumption (DCC)",2210,908,69,18,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,178,177,155,1,0,0,0,0,128,0,-1--1--1,,1|(2172,847)|

1,179,177,156,1,0,0,0,0,128,0,-1--1--1,,1|(2072,976)|

10,180,"Current Consumption (CC)",2110,730,61,18,8,3,0,0,0,0,0,0,0,0,0,0,0

10,181,"Current Consumption (C)",2324,717,60,18,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,182,129,176,1,0,0,0,0,128,0,-1--1--1,,1|(1756,802)|

1,183,181,180,1,0,0,0,0,128,0,-1--1--1,,1|(2252,769)|

1,184,180,176,1,0,0,0,0,128,0,-1--1--1,,1|(2034,712)|

10,185,"Delayed Current Consumption (CC)",2198,632,61,18,8,3,0,0,0,0,0,0,0,0,0,0,0

1,186,181,185,1,0,0,0,0,128,0,-1--1--1,,1|(2289,656)|

1,187,185,180,1,0,0,0,0,128,0,-1--1--1,,1|(2112,673)|
10,188,TIME STEP,2006,612,40,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,189,188,185,0,0,0,0,0,64,0,-1--1--1,,1|(2084,619)|
1,190,106,89,1,1,0,0,0,128,0,-1--1--1,,1|(407,597)|
10,191,INITIAL TIME,1982,664,48,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,192,191,180,0,0,0,0,0,64,0,-1--1--1,,1|(2031,689)|
10,193,Time,2005,795,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,194,193,180,0,0,0,0,0,64,0,-1--1--1,,1|(2044,770)|
10,195,"delta (δ)",1120,1113,30,10,8,131,0,0,0,0,0,0,0,0,0,0,0,0
10,196,INITIAL TIME,429,951,48,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
10,197,Exponential Discounting t 1,959,947,59,31,3,131,0,0,0,0,0,0,0,0,0,0,0
12,198,48,1206,948,10,8,0,3,0,0,-1,0,0,0,0,0,0,0,0,0
1,199,201,197,4,0,0,22,0,0,0,-1--1--1,,1|(1060,949)|
1,200,201,198,100,0,0,22,0,0,0,-1--1--1,,1|(1155,949)|
11,201,48,1108,949,6,8,34,3,0,0,3,0,0,0,0,0,0,0,0,0
10,202,Chge in Exponential Discounting t 1,1108,923,62,18,40,3,0,0,-1,0,0,0,0,0,0,0,0,0
10,203,Lagged Exponential Discounting t 1,945,1045,62,18,8,3,0,0,0,0,0,0,0,0,0,0,0
10,204,"Exponential Discounting t - 1",758,950,51,18,8,3,0,0,0,0,0,0,0,0,0,0,0
10,205,Exponential Discounting t,973,1111,42,18,8,3,0,0,0,0,0,0,0,0,0,0,0
1,206,197,201,1,0,0,0,0,128,0,-1--1--1,,1|(1025,982)|
1,207,197,203,1,0,0,0,0,128,0,-1--1--1,,1|(956,990)|
1,208,203,204,1,0,0,0,0,128,0,-1--1--1,,1|(828,1029)|
1,209,197,204,1,0,0,0,0,128,0,-1--1--1,,1|(856,916)|
1,210,204,205,1,0,0,0,0,128,0,-1--1--1,,1|(835,1090)|
1,211,205,201,1,0,0,0,0,128,0,-1--1--1,,1|(1095,1018)|
10,212,Initial Exponential Discounting t 1,970,851,57,18,8,3,0,0,0,0,0,0,0,0,0,0,0
1,213,212,197,0,1,0,0,0,128,1,-1--1--1,,1|(965,885)|
10,214,Time,709,1030,24,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
10,215,Time,1202,847,24,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,216,215,202,1,1,0,0,0,64,0,-1--1--1,,1|(1173,883)|
1,217,214,204,1,1,0,0,0,128,0,-1--1--1,,1|(737,1002)|
10,218,TIME STEP,1102,825,40,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,219,218,202,0,1,0,0,0,64,0,-1--1--1,,1|(1103,863)|
10,220,"beta (β)",584,1049,35,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
10,221,"beta = β ",464,1070,26,10,8,3,0,0,0,0,0,0,0,0,0,0,0,0

10,222,"Quasi-Hyperbolic Discounting",487,912,58,18,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

10,223,"Quasi-hyperbolic Discount",579,981,54,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0

1,224,214,223,1,1,0,0,0,128,0,-1--1--1,,1|(620,1027)|

1,225,221,223,1,0,0,0,0,128,0,-1--1--1,,1|(497,1029)|

1,226,196,223,1,0,0,0,0,128,0,-1--1--1,,1|(523,950)|

1,227,223,114,1,0,0,0,0,128,0,-1--1--1,,1|(542,917)|

1,228,195,205,1,0,0,0,0,128,0,-1--1--1,,1|(1057,1137)|

1,229,205,223,1,0,0,0,0,128,0,-1--1--1,,1|(740,1135)|

\\---// Sketch information - do not modify anything except names

V300 Do not put anything below this section - it will be ignored

*Biased Behavior

\$192-192-192,0,Open Sans|10||0-0-0|0-0-0|0-0-255|-1--1--1|-1--1--1|96,96,85,0

10,1,Time,1247,966,24,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

10,2,TIME STEP,1482,995,40,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

10,3,Time,519,810,24,10,8,2,17,11,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

10,4,TIME STEP,452,972,40,10,8,2,17,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

10,5,Normal Consumption,501,480,44,18,8,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0,0,0,0,0,0,0

10,6,Util per Year,502,595,38,10,8,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0

10,7,"Biased Coefficient of Relative Risk Aversion (ρ')",469,536,85,25,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0

10,8,Unconstrained Consumption Growth,1163,92,49,27,3,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0

1,9,10,8,4,0,0,22,0,0,0,-1--1--1,,1|(1269,94)|

11,10,1388,1332,94,5,8,34,3,0,0,1,0,0,0,0,0,0,0,0,0,0

10,11,Chg in Unconstrained Consumption,1332,120,68,18,40,131,0,0,-1,0,0,0,0,0,0,0,0,0,0

10,12,Discrete Unconstrained Consumption Growth,1357,335,56,35,3,131,0,0,0,0,0,0,0,1,0,0,0,0,0

10,13,Delayed Unconstrained Consumption Growth Discrete,1286,445,73,27,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0

1,14,13,12,1,0,0,0,0,128,0,-1--1--1,,1|(1338,402)|

10,15,"Discrete Unconstrained Consumption Growth (DUCG)",1335,234,96,24,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0

1,16,12,15,1,0,0,0,0,128,0,-1--1--1,,1|(1355,290)|

10,17,Unconstrained Consumption Growth Discrete,1142,233,69,27,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0

1,18,17,15,1,0,0,0,0,128,0,-1--1--1,,1|(1206,279)|

1,19,17,13,1,0,0,0,0,128,0,-1--1--1,,1|(1146,360)|

1,20,17,12,1,0,0,0,0,128,0,-1--1--1,,1|(1201,336)|

10,21,TIME STEP,1496,301,40,10,8,2,0,43,-1,0,0,0,128-128-128,0-0-0,Open Sans|10||128-128-128,0,0,0,0,0,0

1,22,21,12,1,0,0,0,0,64,0,-1--1--1,,1|(1441,328)|
1,23,8,17,1,0,0,0,0,128,0,-1--1--1,,1|(1120,166)|
10,24,Time,1180,154,24,10,8,2,0,43,-1,0,0,0,128-128-128,0-0-0,Open Sans|10||128-128-128,0,0,0,0,0
1,25,24,17,1,0,0,0,0,64,0,-1--1--1,,1|(1161,182)|
1,26,24,15,1,0,0,0,0,128,0,-1--1--1,,1|(1245,160)|
1,27,15,11,1,0,0,0,0,128,0,-1--1--1,,1|(1347,172)|
10,28,Biased Lifetime Utility,987,674,48,18,8,3,0,0,0,0,0,0,0,0,0,0,0
10,29,FINAL TIME,1087,612,44,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0
1,30,29,28,1,0,0,0,0,64,0,-1--1--1,,1|(1034,653)|
10,31,Time,964,607,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0
1,32,31,28,1,0,0,0,0,128,0,-1--1--1,,1|(968,631)|
12,33,48,1429,88,10,8,0,3,0,0,-1,0,0,0,0,0,0,0,0,0,0
1,34,10,33,100,0,0,22,0,0,0,-1--1--1,,1|(1378,94)|
10,35,Initial Unconstrained Consumption Growth,1159,36,69,18,8,3,0,0,0,0,0,0,0,0,0,0,0
10,36,Unconstrained Consumption Growth Rate,1393,22,69,27,8,131,0,0,0,0,0,0,0,0,0,0,0,0
1,37,35,8,0,0,0,0,128,1,-1--1--1,,1|(1159,52)|
1,38,36,11,1,0,0,0,0,128,0,-1--1--1,,1|(1368,73)|
10,39,"Biased Real Lifetime Utility (U)",820,722,45,24,3,131,0,0,0,0,0,0,0,0,0,0,0,0
12,40,48,601,718,10,8,0,3,0,0,-1,0,0,0,0,0,0,0,0,0,0
1,41,43,39,4,0,0,22,0,0,0,-1--1--1,,1|(739,719)|
1,42,43,40,100,0,0,22,0,0,0,-1--1--1,,1|(652,719)|
11,43,48,698,719,5,8,34,3,0,0,1,0,0,0,0,0,0,0,0,0
10,44,Biased Real Instantaneous Utility,698,745,66,18,40,3,0,0,-1,0,0,0,0,0,0,0,0,0
10,45,"Initial Biased Real Lifetime Utility (U)",816,648,56,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0
1,46,45,39,0,1,0,0,128,1,-1--1--1,,1|(816,675)|
1,47,39,28,1,0,0,0,0,128,0,-1--1--1,,1|(886,722)|
10,48,Biased Wealth,658,272,39,25,3,131,0,0,0,0,0,0,0,0,0,0,0,0
12,49,48,873,273,10,8,0,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
1,50,52,49,4,0,0,22,0,0,0,-1--1--1,,1|(820,268)|
1,51,52,48,100,0,0,22,0,0,0,-1--1--1,,1|(731,268)|
11,52,48,771,268,6,8,34,3,0,0,1,0,0,0,0,0,0,0,0,0
10,53,Biased Current Consumption,771,294,47,18,40,3,0,0,-1,0,0,0,0,0,0,0,0,0
12,54,48,654,98,10,8,0,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
1,55,57,48,4,0,0,22,0,0,0,-1--1--1,,1|(654,212)|
1,56,57,54,100,0,0,22,0,0,0,-1--1--1,,1|(654,135)|
11,57,48,654,171,8,6,33,3,0,0,4,0,0,0,0,0,0,0,0,0

10,58,Biased Wealth Return,707,171,45,18,40,131,0,0,-1,0,0,0,0,0,0,0,0,0,0,0
10,59,"Time to Chg Biased Current Consumption (C)",956,278,70,32,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
10,60,"Discrete Biased Wealth (W)",662,-107,40,24,3,131,0,0,0,0,0,0,0,1,0,0,0,0,0,0
10,61,"Delayed Biased Wealth (W)",472,-114,48,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,62,61,60,1,0,0,0,0,128,0,-1--1--1,,1|(535,-142)|
10,63,"Discrete Biased Wealth (DW)",819,1,48,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,64,60,63,1,0,0,0,0,128,0,-1--1--1,,1|(754,-99)|
10,65,"Biased Wealth (W) Discrete",577,-26,60,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,66,65,63,1,0,0,0,0,128,0,-1--1--1,,1|(688,-65)|
1,67,65,61,1,0,0,0,0,128,0,-1--1--1,,1|(483,-50)|
1,68,65,60,1,0,0,0,0,128,0,-1--1--1,,1|(586,-71)|
10,69,TIME STEP,757,-157,40,10,8,2,0,43,-1,0,0,0,128-128-128,0-0-0,Open Sans|10||128-128-
128,0,0,0,0,0,0
10,70,"Biased Current Consumption (C)",987,190,57,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,71,59,70,1,0,0,0,0,64,0,-1--1--1,,1|(985,235)|
10,72,"Discrete Biased Current Consumption (DCC)",889,432,73,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0
10,73,"Biased Current Consumption (C) Discrete",1044,374,57,27,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,74,73,72,1,0,0,0,0,128,0,-1--1--1,,1|(995,424)|
1,75,70,73,1,0,0,0,0,128,0,-1--1--1,,1|(1038,244)|
1,76,63,58,1,0,0,0,0,128,0,-1--1--1,,1|(814,94)|
1,77,69,60,1,0,0,0,0,128,0,-1--1--1,,1|(732,-137)|
1,78,72,53,1,0,0,0,0,128,0,-1--1--1,,1|(792,365)|
1,79,48,65,1,0,0,0,0,128,0,-1--1--1,,1|(525,191)|
10,80,Time,904,337,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|12||128-128-128,0,0,0,0,0,0,0
10,81,TIME STEP,549,104,40,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|12||128-128-128,0,0,0,0,0,0,0
1,82,81,58,1,1,0,0,0,128,0,-1--1--1,,1|(648,111)|
1,83,80,53,1,0,0,0,0,128,0,-1--1--1,,1|(843,337)|
12,84,48,656,422,10,8,0,3,0,0,-1,0,0,0,0,0,0,0,0,0,0,0
1,85,87,84,4,0,0,22,0,0,0,-1--1--1,,1|(658,383)|
1,86,87,48,100,0,0,22,0,0,0,-1--1--1,,1|(658,319)|
11,87,48,658,347,8,6,33,3,0,0,4,0,0,0,0,0,0,0,0,0,0
10,88,Biased Last Consumption,718,347,44,18,40,131,0,0,-1,0,0,0,0,0,0,0,0,0,0,0
1,89,48,87,1,0,0,0,0,128,0,-1--1--1,,1|(622,314)|
10,90,Time,700,-13,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0
1,91,48,70,1,0,0,0,0,128,0,-1--1--1,,1|(835,172)|
1,92,90,58,1,0,0,0,0,128,0,-1--1--1,,1|(775,90)|
1,93,80,72,1,0,0,0,0,128,0,-1--1--1,,1|(882,377)|

1,94,80,73,1,0,0,0,0,128,0,-1--1--1,,1|(990,331)|
1,95,90,63,1,0,0,0,0,128,0,-1--1--1,,1|(746,-1)|
10,96,Time,785,421,24,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,97,96,88,0,1,0,0,0,128,0,-1--1--1,,1|(759,393)|
1,98,90,65,0,0,0,0,0,128,0,-1--1--1,,1|(663,-17)|
10,99,FINAL TIME,755,429,44,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,100,99,88,1,0,0,0,0,64,0,-1--1--1,,1|(745,397)|
10,101,TIME STEP,660,471,40,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,102,101,88,0,0,0,0,0,64,0,-1--1--1,,1|(683,419)|
10,103,"Discrete Biased Current Consumption (C)",910,502,58,35,3,131,0,0,0,0,0,0,1,0,0,0,0,0
10,104,"Delayed Biased Current Consumption (C)",1094,469,73,18,8,131,0,0,0,0,0,0,0,0,0,0,0
1,105,104,103,1,0,0,0,0,128,0,-1--1--1,,1|(1025,504)|
1,106,73,104,1,0,0,0,0,128,0,-1--1--1,,1|(1091,434)|
1,107,8,70,1,0,0,0,0,128,0,-1--1--1,,1|(1029,108)|
1,108,103,72,1,0,0,0,0,128,0,-1--1--1,,1|(819,485)|
1,109,73,103,1,0,0,0,0,128,0,-1--1--1,,1|(1009,442)|
10,110,TIME STEP,1036,543,40,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,111,110,103,0,0,0,0,0,64,0,-1--1--1,,1|(993,528)|
10,112,"Biased Utility (u)",653,542,53,10,8,3,0,0,0,0,0,0,0,0,0,0,0
1,113,5,112,1,0,0,0,0,128,0,-1--1--1,,1|(586,497)|
1,114,7,112,1,0,0,0,0,128,0,-1--1--1,,1|(571,553)|
1,115,6,112,1,0,0,0,0,128,0,-1--1--1,,1|(576,591)|
1,116,72,112,1,0,0,0,0,128,0,-1--1--1,,1|(744,471)|
1,117,112,44,1,0,0,0,0,128,0,-1--1--1,,1|(673,565)|
10,118,"Income Growth Rate (G)",440,206,49,18,8,3,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0
10,119,Retirement Time,537,424,52,10,8,131,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0
10,120,"Normal Labor Income (Y)",456,358,44,18,8,3,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0
10,121,Time to Chg WR,591,147,49,10,8,3,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0
10,122,Retirement Switch,565,351,45,17,8,131,0,0,0,0,0,0,0,0,0,0,0
1,123,119,122,1,0,0,0,0,64,0,-1--1--1,,1|(556,402)|
1,124,121,58,1,0,0,0,0,128,0,-1--1--1,,1|(615,168)|
12,125,48,437,267,10,8,0,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0
1,126,127,125,100,0,0,22,0,0,0,-1--1--1,,1|(482,267)|
11,127,48,524,267,6,8,34,3,0,0,1,0,0,0,0,0,0,0,0
10,128,"Labor Income (Y)",524,285,56,10,40,3,0,0,-1,0,0,0,0,0,0,0,0

1,129,118,128,1,0,0,0,0,64,0,-1--1--1,,1|(510,235)|
1,130,120,128,1,0,0,0,0,64,0,-1--1--1,,1|(470,313)|
1,131,122,128,1,0,0,0,0,64,0,-1--1--1,,1|(557,312)|
1,132,127,48,4,0,0,22,0,0,0,-1--1--1,,1|(574,267)|
10,133,Death Time,905,96,36,10,8,3,0,40,0,0,0,0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0
10,134,FINAL TIME,932,23,44,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,135,134,133,1,0,0,0,0,64,0,-1--1--1,,1|(933,51)|
10,136,"Initial Wealth (W)",597,199,43,26,8,131,0,40,0,0,0,0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
1,137,136,48,1,0,0,0,0,128,1,-1--1--1,,1|(604,233)|
1,138,133,58,1,0,0,0,0,64,0,-1--1--1,,1|(805,166)|
10,139,"Perception of (ρ)",311,431,60,16,8,131,0,18,-1,0,0,0,0-0-0,0-0-0,|10|B|255-0-0,0,0,0,0,0,0
1,140,139,7,0,0,0,0,64,0,-1--1--1,,1|(377,475)|
10,141,"Countervail Biased Interest Rate (r ')",324,28,59,18,8,3,0,0,0,0,0,0,0,0,0,0,0
10,142,"Biased Coefficient of Relative Risk Aversion (ρ)",115,33,69,33,8,130,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,143,142,141,0,0,0,0,128,0,-1--1--1,,1|(217,30)|
10,144,"delta (δ)",411,135,37,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,145,144,141,1,0,0,0,0,128,0,-1--1--1,,1|(354,104)|
10,146,"Biased Interest Rate (r ')",717,83,47,18,8,3,0,0,0,0,0,0,0,0,0,0,0
10,147,"Perception of (r ')",599,48,63,17,8,131,0,18,-1,0,0,0,0-0-0,0-0-0,|10|B|255-0-0,0,0,0,0,0,0
1,148,147,146,1,0,0,0,0,64,0,-1--1--1,,1|(631,73)|
1,149,146,58,1,0,0,0,0,128,0,-1--1--1,,1|(715,128)|
10,150,Death Time,825,217,43,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,151,150,53,1,0,0,0,0,128,0,-1--1--1,,1|(809,247)|
10,152,"Countervail Biased Coefficient of Relative Risk Aversion (ρ)",357,660,82,27,8,3,0,0,0,0,0,0,0,0,0,0,0
10,153,"Biased Interest Rate (r ')",501,773,51,18,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
10,154,"delta (δ)",401,790,37,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,155,154,152,1,0,0,0,0,128,0,-1--1--1,,1|(405,727)|
1,156,153,152,1,0,0,0,0,128,0,-1--1--1,,1|(478,713)|
10,157,"Countervail Perception of (ρ)",174,595,57,18,8,3,0,0,0,0,0,0,0,0,0,0,0
1,158,152,157,1,0,0,0,0,64,0,-1--1--1,,1|(222,645)|
10,159,"Countervail Perception of (r ')",359,-87,57,18,8,3,0,0,0,0,0,0,0,0,0,0,0
1,160,141,159,1,0,0,0,0,128,0,-1--1--1,,1|(361,-15)|

10,161,"Interest Rate (r)",216,-50,52,10,8,3,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0

1,162,161,141,1,0,0,0,0,128,0,-1--1--1,,1|(237,-10)|

10,163,"Interest Rate (r)",677,22,59,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,164,163,146,1,0,0,0,0,128,0,-1--1--1,,1|(712,44)|

10,165,"Coefficient of Relative Risk Aversion (ρ)",226,134,71,18,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,166,165,141,0,0,0,0,0,64,0,-1--1--1,,1|(269,86)|

10,167,"Coefficient of Relative Risk Aversion (ρ)",146,774,71,18,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,168,167,152,1,0,0,0,0,64,0,-1--1--1,,1|(217,711)|

10,169,"Interest Rate (r)",294,787,59,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,170,169,152,1,0,0,0,0,128,0,-1--1--1,,1|(311,721)|

10,171,"Coefficient of Relative Risk Aversion (ρ)",259,503,71,18,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,172,171,7,0,0,0,0,0,64,0,-1--1--1,,1|(350,516)|

1,173,161,159,1,0,0,0,0,64,0,-1--1--1,,1|(245,-84)|

10,174,Time to Chg Unconstrained Consumption,1492,170,92,27,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0

1,175,174,11,1,0,0,0,0,128,0,-1--1--1,,1|(1409,132)|

1,176,171,157,1,0,0,0,0,128,0,-1--1--1,,1|(200,552)|

10,177,"Discrete Biased Real Lifetime Utility (U)",2006,687,45,31,3,131,0,0,0,0,0,0,1,0,0,0,0,0

10,178,"Delayed Biased Real Lifetime Utility (U)",1890,805,62,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0

1,179,178,177,1,0,0,0,0,128,0,-1--1--1,,1|(1997,762)|

10,180,"Discrete Biased Real Lifetime Utility (DBRLU)",1883,580,76,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0

1,181,177,180,1,0,0,0,0,128,0,-1--1--1,,1|(1980,620)|

10,182,"Biased Real Lifetime Utility (U) Discrete",1792,702,62,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0

1,183,182,180,1,0,0,0,0,128,0,-1--1--1,,1|(1810,640)|

1,184,182,178,1,0,0,0,0,128,0,-1--1--1,,1|(1816,762)|

1,185,182,177,1,0,0,0,0,128,0,-1--1--1,,1|(1900,736)|

10,186,"Biased Discrete Real Lifetime Utility (DBRLU)",1810,474,76,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0

1,187,180,186,1,0,0,0,0,128,0,-1--1--1,,1|(1873,525)|

10,188,FINAL TIME,1637,454,44,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,189,188,186,0,0,0,0,0,64,0,-1--1--1,,1|(1700,461)|

10,190,Time,1663,500,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,191,190,186,0,0,0,0,0,64,0,-1--1--1,,1|(1703,492)|

10,192,Time,1715,767,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,193,192,182,0,0,0,0,0,64,0,-1--1--1,,1|(1742,743)|

10,194,"Biased Real Lifetime Utility (U)",1608,645,66,18,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,195,194,182,1,0,0,0,0,128,0,-1--1--1,,1|(1683,703)|

10,196,TIME STEP,2071,756,40,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,197,196,177,0,0,0,0,0,64,0,-1--1--1,,1|(2053,737)|

1,198,190,180,1,0,0,0,0,128,0,-1--1--1,,1|(1753,532)|

10,199,Biased Consumption,1828,241,44,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0

10,200,"Delayed Biased Consumption (C)",1744,335,57,18,8,3,0,0,-1,0,0,0,0,0,0,0,0,0

1,201,200,199,1,0,0,0,0,64,0,-1--1--1,,1|(1753,277)|

10,202,"Discrete Actual Current Consumption (DACC)",1828,277,76,18,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

10,203,"Discrete Actual Current Consumption (DACC)",1744,360,76,18,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

10,204,Discrete Biased Real Lifetime Utility,2052,416,62,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0

10,205,"Discrete Biased Current Consumption (DCC)",1910,377,77,18,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,206,205,200,1,0,0,0,0,128,0,-1--1--1,,1|(1800,395)|

1,207,205,199,1,0,0,0,0,128,0,-1--1--1,,1|(1925,300)|

10,208,"Biased Current Consumption (BCC)",2047,158,65,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0

10,209,"Delayed Biased Current Consumption (BCC)",1936,38,73,18,8,3,0,0,-1,0,0,0,0,0,0,0,0,0

1,210,209,208,1,0,0,0,0,64,0,-1--1--1,,1|(2027,81)|

10,211,"Biased Current Consumption (C)",1797,138,60,18,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,212,211,208,1,0,0,0,0,128,0,-1--1--1,,1|(1870,185)|

1,213,211,209,1,0,0,0,0,128,0,-1--1--1,,1|(1859,48)|

10,214,TIME STEP,1906,-50,40,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,215,214,209,0,0,0,0,0,64,0,-1--1--1,,1|(1916,-17)|

1,216,180,204,1,0,0,0,0,128,0,-1--1--1,,1|(2001,510)|

1,217,208,204,1,0,0,0,0,128,0,-1--1--1,,1|(2078,268)|

1,218,101,122,1,0,0,0,0,128,0,-1--1--1,,1|(619,407)|

10,219,INITIAL TIME,2018,258,48,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,220,219,208,0,0,0,0,0,64,0,-1--1--1,,1|(2028,218)|

10,221,Time,2073,82,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

1,222,221,208,0,0,0,0,0,64,0,-1--1--1,,1|(2063,109)|

10,223,"delta (δ)",1357,993,30,10,8,131,0,0,0,0,0,0,0,0,0,0,0,0

10,224,"beta (β)",730,975,35,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

10,225,INITIAL TIME,888,833,48,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

10,226,Exponential Discounting t 1,1187,824,50,28,3,131,0,0,0,0,0,0,0,0,0,0,0,0

12,227,48,1443,828,10,8,0,3,0,0,-1,0,0,0,0,0,0,0,0,0
1,228,230,226,4,0,0,22,0,0,0,-1--1--1,,1|(1288,829)|
1,229,230,227,100,0,0,22,0,0,0,-1--1--1,,1|(1392,829)|
11,230,48,1345,829,6,8,34,3,0,0,3,0,0,0,0,0,0,0,0,0
10,231,Chge in Exponential Discounting t 1,1345,803,62,18,40,3,0,0,-1,0,0,0,0,0,0,0,0,0
10,232,Lagged Exponential Discounting t 1,1182,925,62,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0
10,233,"Exponential Discounting t - 1",1025,873,56,17,8,131,0,0,0,0,0,0,0,0,0,0,0,0
10,234,Exponential Discounting t,1210,991,53,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0
1,235,226,230,1,0,0,0,0,128,0,-1--1--1,,1|(1262,862)|
1,236,226,232,1,0,0,0,0,128,0,-1--1--1,,1|(1193,870)|
1,237,232,233,1,0,0,0,0,128,0,-1--1--1,,1|(1069,924)|
1,238,226,233,1,0,0,0,0,128,0,-1--1--1,,1|(1064,827)|
1,239,233,234,1,0,0,0,0,128,0,-1--1--1,,1|(1072,970)|
1,240,234,230,1,0,0,0,0,128,0,-1--1--1,,1|(1332,898)|
10,241,Initial Exponential Discounting t 1,1207,731,57,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0
1,242,241,226,0,0,0,0,0,128,1,-1--1--1,,1|(1200,765)|
10,243,"Quasi-Hyperbolic Discounting",820,907,55,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0
10,244,Time,937,978,24,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,245,244,243,1,1,0,0,0,64,0,-1--1--1,,1|(865,953)|
10,246,Time,1439,727,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,247,246,231,1,0,0,0,0,64,0,-1--1--1,,1|(1410,763)|
1,248,225,243,1,1,0,0,0,128,0,-1--1--1,,1|(853,875)|
1,249,244,233,1,1,0,0,0,128,0,-1--1--1,,1|(980,945)|
10,250,TIME STEP,1331,714,40,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,251,250,231,0,0,0,0,0,64,0,-1--1--1,,1|(1335,747)|
1,252,223,234,1,0,0,0,0,128,0,-1--1--1,,1|(1302,1010)|
1,253,224,243,1,0,0,0,0,128,0,-1--1--1,,1|(749,945)|
1,254,243,44,1,0,0,0,0,128,0,-1--1--1,,1|(720,840)|
1,255,234,243,1,0,0,0,0,64,0,-1--1--1,,1|(988,1009)|
\\--// Sketch information - do not modify anything except names
V300 Do not put anything below this section - it will be ignored
*Actual Behavior
\$192-192-192,0,Open Sans|10||0-0-0|0-0-0|0-0-255|-1--1--1|-1--1--1|96,96,75,0
10,1,"delta (δ)",1125,1140,30,10,8,131,0,0,0,0,0,0,0,0,0,0,0,0
10,2,Time,1041,1102,24,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
10,3,TIME STEP,1276,1131,40,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0

10,4,Time,313,946,24,10,8,2,17,11,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
10,5,TIME STEP,246,1108,40,10,8,2,17,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
10,6,Normal Consumption,285,689,44,18,8,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
10,7,Util per Year,287,801,38,10,8,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
10,8,Actual Lifetime Utility,775,799,47,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
10,9,FINAL TIME,1016,774,44,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,10,9,8,1,0,0,0,0,64,0,-1--1--1,,1|(888,797)|
10,11,Time,908,759,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,12,11,8,1,0,0,0,0,128,0,-1--1--1,,1|(854,771)|
10,13,"Actual Real Lifetime Utility (U)",581,876,45,24,3,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0
12,14,48,362,872,10,8,0,3,0,0,-1,0,0,0,0,0,0,0,0,0,0,0
1,15,17,13,4,0,0,22,0,0,0,-1--1--1,,1|(502,874)|
1,16,17,14,100,0,0,22,0,0,0,-1--1--1,,1|(415,874)|
11,17,48,464,874,5,8,34,3,0,0,1,0,0,0,0,0,0,0,0,0,0,0
10,18,Actual Real Instantaneous Utility,464,900,66,18,40,3,0,0,-1,0,0,0,0,0,0,0,0,0,0,0
10,19,"Initial Actual Real Lifetime Utility (U)",567,821,56,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,20,19,13,0,1,0,0,0,128,1,-1--1--1,,1|(570,838)|
1,21,13,8,1,0,0,0,0,128,0,-1--1--1,,1|(675,845)|
10,22,Actual Wealth,453,467,39,25,3,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0
12,23,48,668,468,10,8,0,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
1,24,26,23,4,0,0,22,0,0,0,-1--1--1,,1|(615,463)|
1,25,26,22,100,0,0,22,0,0,0,-1--1--1,,1|(526,463)|
11,26,48,566,463,6,8,34,3,0,0,1,0,0,0,0,0,0,0,0,0,0,0
10,27,Actual Current Consumption,566,489,46,18,40,3,0,0,-1,0,0,0,0,0,0,0,0,0,0,0
12,28,48,449,293,10,8,0,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
1,29,31,22,4,0,0,22,0,0,0,-1--1--1,,1|(452,407)|
1,30,31,28,100,0,0,22,0,0,0,-1--1--1,,1|(452,331)|
11,31,48,452,367,8,6,33,3,0,0,4,0,0,0,0,0,0,0,0,0,0,0
10,32,Actual Wealth Return,504,367,44,18,40,131,0,0,-1,0,0,0,0,0,0,0,0,0,0,0
10,33,"Initial Actual Wealth (W)",397,410,39,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0
10,34,"Actual Utility (u)",435,733,52,10,8,3,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,35,33,22,0,1,0,0,0,128,1,-1--1--1,,1|(416,430)|
10,36,"Time to Chg Actual Current Consumption (C)",766,461,83,27,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0
10,37,"Discrete Actual Wealth (W)",444,126,53,30,3,131,0,0,0,0,0,0,0,0,1,0,0,0,0,0
10,38,"Delayed Actual Wealth (W)",240,143,47,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,39,38,37,1,0,0,0,0,128,0,-1--1--1,,1|(294,95)|

10,40,"Discrete Actual Wealth (DW)",602,236,47,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,41,37,40,1,0,0,0,0,128,0,-1--1--1,,1|(529,135)|
10,42,"Actual Wealth (W) Discrete",366,217,59,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,43,42,40,1,0,0,0,0,128,0,-1--1--1,,1|(480,178)|
1,44,42,38,1,0,0,0,0,128,0,-1--1--1,,1|(271,212)|
1,45,42,37,1,0,0,0,0,128,0,-1--1--1,,1|(392,167)|
10,46,TIME STEP,510,67,40,10,8,2,0,43,-1,0,0,0,128-128-128,0-0-0,Open Sans|10||128-128-
128,0,0,0,0,0,0
10,47,"Actual Current Consumption (C)",773,366,57,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,48,36,47,1,0,0,0,0,64,0,-1--1--1,,1|(781,416)|
10,49,"Discrete Actual Current Consumption (C)",705,697,58,35,3,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
10,50,"Delayed Actual Current Consumption (C)",889,664,72,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,51,50,49,1,0,0,0,0,128,0,-1--1--1,,1|(820,699)|
10,52,"Discrete Actual Current Consumption (DACC)",682,606,72,18,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,53,49,52,1,0,0,0,0,128,0,-1--1--1,,1|(682,675)|
10,54,"Actual Current Consumption (C) Discrete",839,569,57,27,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
1,55,54,52,1,0,0,0,0,128,0,-1--1--1,,1|(785,611)|
1,56,54,50,1,0,0,0,0,128,0,-1--1--1,,1|(874,612)|
1,57,54,49,1,0,0,0,0,128,0,-1--1--1,,1|(788,675)|
10,58,TIME STEP,675,783,40,10,8,2,0,43,-1,0,0,0,128-128-128,0-0-0,Open Sans|10||128-128-
128,0,0,0,0,0,0
1,59,58,49,1,0,0,0,0,64,0,-1--1--1,,1|(690,747)|
1,60,47,54,1,0,0,0,0,128,0,-1--1--1,,1|(847,428)|
1,61,40,32,1,0,0,0,0,128,0,-1--1--1,,1|(581,281)|
1,62,46,37,0,0,0,0,0,128,0,-1--1--1,,1|(493,82)|
1,63,52,27,1,0,0,0,0,128,0,-1--1--1,,1|(592,550)|
1,64,22,42,1,0,0,0,0,128,0,-1--1--1,,1|(329,418)|
10,65,Time,699,532,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|12||128-128-128,0,0,0,0,0,0,0
10,66,TIME STEP,376,297,40,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|12||128-128-128,0,0,0,0,0,0,0
1,67,66,32,1,1,0,0,0,128,0,-1--1--1,,1|(457,315)|
1,68,65,27,1,0,0,0,0,128,0,-1--1--1,,1|(638,532)|
12,69,48,451,617,10,8,0,3,0,0,-1,0,0,0,0,0,0,0,0,0,0,0
1,70,72,69,4,0,0,22,0,0,0,-1--1--1,,1|(453,578)|
1,71,72,22,100,0,0,22,0,0,0,-1--1--1,,1|(453,514)|
11,72,48,453,542,8,6,33,3,0,0,4,0,0,0,0,0,0,0,0,0,0,0
10,73,Actual Last Consumption,513,542,44,18,40,131,0,0,-1,0,0,0,0,0,0,0,0,0,0,0
10,74,FINAL TIME,540,664,44,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|12||128-128-128,0,0,0,0,0,0,0

1,75,74,73,0,0,0,0,64,0,-1--1--1,,1|(528,613)|
10,76,TIME STEP,456,684,40,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|12||128-128-128,0,0,0,0,0,0
1,77,76,73,1,0,0,0,0,64,0,-1--1--1,,1|(469,615)|
1,78,22,72,1,0,0,0,0,128,0,-1--1--1,,1|(417,509)|
10,79,Time,485,211,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,80,22,47,1,0,0,0,0,128,0,-1--1--1,,1|(595,374)|
1,81,52,34,1,0,0,0,0,128,0,-1--1--1,,1|(596,691)|
1,82,79,32,1,0,0,0,0,128,0,-1--1--1,,1|(531,274)|
1,83,65,52,1,0,0,0,0,128,0,-1--1--1,,1|(682,563)|
1,84,65,54,1,0,0,0,0,128,0,-1--1--1,,1|(785,526)|
1,85,79,40,1,0,0,0,0,128,0,-1--1--1,,1|(530,227)|
10,86,Time,573,618,24,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,87,86,73,0,1,0,0,0,0,128,0,-1--1--1,,1|(550,589)|
1,88,79,42,0,0,0,0,0,128,0,-1--1--1,,1|(449,212)|
1,89,6,34,1,0,0,0,0,128,0,-1--1--1,,1|(363,694)|
1,90,7,34,1,0,0,0,0,128,0,-1--1--1,,1|(390,772)|
10,91,Unconstrained Consumption Growth,1026,217,49,27,3,131,0,0,0,0,0,0,0,0,0,0,0
1,92,93,91,4,0,0,22,0,0,0,-1--1--1,,1|(1132,219)|
11,93,1388,1195,219,5,8,34,3,0,0,1,0,0,0,0,0,0,0,0
10,94,Chg in Unconstrained Consumption,1195,245,68,18,40,131,0,0,-1,0,0,0,0,0,0,0,0
10,95,Discrete Unconstrained Consumption Growth,1220,460,56,35,3,131,0,0,0,0,0,0,1,0,0,0,0
10,96,Delayed Unconstrained Consumption Growth
Discrete,1149,570,73,27,8,131,0,0,0,0,0,0,0,0,0,0,0
1,97,96,95,1,0,0,0,0,128,0,-1--1--1,,1|(1201,527)|
10,98,"Discrete Unconstrained Consumption Growth (DUCG
)",1198,359,96,24,8,131,0,0,0,0,0,0,0,0,0,0,0
1,99,95,98,1,0,0,0,0,128,0,-1--1--1,,1|(1218,415)|
10,100,Unconstrained Consumption Growth Discrete,1005,358,69,27,8,131,0,0,0,0,0,0,0,0,0,0,0
1,101,100,98,1,0,0,0,0,128,0,-1--1--1,,1|(1069,404)|
1,102,100,96,1,0,0,0,0,128,0,-1--1--1,,1|(1009,485)|
1,103,100,95,1,0,0,0,0,128,0,-1--1--1,,1|(1064,461)|
10,104,TIME STEP,1359,426,40,10,8,2,0,43,-1,0,0,0,128-128-128,0-0-0,Open Sans|10||128-128-
128,0,0,0,0,0,0
1,105,104,95,1,0,0,0,0,64,0,-1--1--1,,1|(1304,453)|
1,106,91,100,1,0,0,0,0,128,0,-1--1--1,,1|(983,291)|
10,107,Time,1043,279,24,10,8,2,1,43,-1,0,0,0,128-128-128,0-0-0,Open Sans|10||128-128-
128,0,0,0,0,0,0
1,108,107,100,1,1,0,0,0,64,0,-1--1--1,,1|(1024,307)|

1,109,107,98,1,1,0,0,0,128,0,-1--1--1,,1|(1108,285)|
1,110,98,94,1,0,0,0,0,128,0,-1--1--1,,1|(1210,297)|
12,111,48,1292,213,10,8,0,3,0,0,-1,0,0,0,0,0,0,0,0,0,0
1,112,93,111,100,0,0,22,0,0,0,-1--1--1,,1|(1241,219)|
10,113,Initial Unconstrained Consumption Growth,1022,161,69,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0,0
10,114,Unconstrained Consumption Growth Rate,1256,147,98,25,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0
1,115,113,91,0,0,0,0,0,128,1,-1--1--1,,1|(1022,178)|
1,116,114,94,1,0,0,0,0,128,0,-1--1--1,,1|(1231,198)|
10,117,Time to Chg Unconstrained Consumption,1355,295,92,27,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0
1,118,117,94,1,0,0,0,0,128,0,-1--1--1,,1|(1272,257)|
1,119,91,47,1,0,0,0,0,128,0,-1--1--1,,1|(895,246)|
1,120,34,18,1,0,0,0,0,128,0,-1--1--1,,1|(463,789)|
10,121,Death Time,624,416,43,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0
1,122,121,27,1,0,0,0,0,128,0,-1--1--1,,1|(594,450)|
10,123,Death Time,689,280,43,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0
1,124,123,32,1,0,0,0,0,128,0,-1--1--1,,1|(609,321)|
10,125,"Interest Rate (r)",434,256,59,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-
128,0,0,0,0,0,0
1,126,125,32,1,0,0,0,0,128,0,-1--1--1,,1|(475,291)|
10,127,Time to Chg WR,361,345,56,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-
128,0,0,0,0,0,0
1,128,127,32,1,0,0,0,0,128,0,-1--1--1,,1|(398,369)|
10,129,"Coefficient of Relative Risk Aversion (ρ)",251,757,71,18,8,2,0,3,-1,0,0,0,128-128-
128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0
1,130,129,34,0,0,0,0,0,64,0,-1--1--1,,1|(345,744)|
12,131,48,237,462,10,8,0,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-0,0,0,0,0,0,0
1,132,133,131,100,0,0,22,0,0,0,-1--1--1,,1|(281,464)|
11,133,48,321,464,6,8,34,3,0,0,1,0,0,0,0,0,0,0,0,0,0
10,134,"Labor Income (Y)",321,482,53,10,40,3,0,40,-1,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-
0,0,0,0,0,0,0
10,135,"Income Growth Rate (G)",253,407,49,18,8,3,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-
0,0,0,0,0,0,0
10,136,Retirement Time,341,636,52,10,8,131,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-
0,0,0,0,0,0,0
10,137,"Normal Labor Income (Y)",246,561,44,18,8,3,0,40,0,0,0,0,0-0-0,0-0-0,Open Sans|10||0-0-
0,0,0,0,0,0,0
1,138,135,134,1,0,0,0,0,64,0,-1--1--1,,1|(264,441)|
1,139,137,134,1,0,0,0,0,64,0,-1--1--1,,1|(253,519)|
10,140,Retirement Switch,357,566,45,17,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0
1,141,136,140,1,0,0,0,0,64,0,-1--1--1,,1|(355,613)|

1,142,140,134,1,0,0,0,0,128,0,-1--1--1,,1|(352,520)|
1,143,133,22,4,0,0,22,0,0,0,-1--1--1,,1|(370,464)|
10,144,"Discrete Actual Real Lifetime Utility (U)",2006,891,45,31,3,131,0,0,0,0,0,1,0,0,0,0,0
10,145,"Delayed Actual Real Lifetime Utility (U)",1890,1009,61,18,8,131,0,0,0,0,0,0,0,0,0,0,0
1,146,145,144,1,0,0,0,0,128,0,-1--1--1,,1|(1997,966)|
10,147,"Discrete Actual Real Lifetime Utility (DARLU)",1883,784,76,18,8,131,0,0,0,0,0,0,0,0,0,0,0
1,148,144,147,1,0,0,0,0,128,0,-1--1--1,,1|(1980,824)|
10,149,"Actual Real Lifetime Utility (U) Discrete",1792,906,61,18,8,131,0,0,0,0,0,0,0,0,0,0,0
1,150,149,147,1,0,0,0,0,128,0,-1--1--1,,1|(1810,844)|
1,151,149,145,1,0,0,0,0,128,0,-1--1--1,,1|(1816,966)|
1,152,149,144,1,0,0,0,0,128,0,-1--1--1,,1|(1900,940)|
10,153,"Actual Discrete Real Lifetime Utility (DBRLU)",1810,678,76,18,8,3,0,0,0,0,0,0,0,0,0,0,0
1,154,147,153,1,0,0,0,0,128,0,-1--1--1,,1|(1873,729)|
10,155,FINAL TIME,1637,658,44,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,156,155,153,0,0,0,0,0,64,0,-1--1--1,,1|(1700,665)|
10,157,Time,1663,704,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,158,157,153,0,0,0,0,0,64,0,-1--1--1,,1|(1703,696)|
10,159,Time,1715,971,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,160,159,149,0,0,0,0,0,64,0,-1--1--1,,1|(1742,947)|
10,161,TIME STEP,2071,960,40,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,162,161,144,0,0,0,0,0,64,0,-1--1--1,,1|(2053,941)|
1,163,157,147,1,0,0,0,0,128,0,-1--1--1,,1|(1753,736)|
10,164,"Actual Real Lifetime Utility (U)",1594,842,65,18,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,165,164,149,1,0,0,0,0,128,0,-1--1--1,,1|(1650,884)|
10,166,Actual Consumption,1835,444,44,18,8,3,0,0,0,0,0,0,0,0,0,0,0
10,167,"Delayed Actual Consumption (C)",1746,545,57,18,8,3,0,0,-1,0,0,0,0,0,0,0,0
1,168,167,166,1,0,0,0,0,64,0,-1--1--1,,1|(1761,488)|
10,169,"Current Consumption (C)",1744,564,60,18,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
10,170,"beta (β)",498,1122,35,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
10,171,Discrete Actual Real Lifetime Utility,2124,633,61,18,8,3,0,0,0,0,0,0,0,0,0,0,0
10,172,"Discrete Actual Current Consumption (DACC)",1960,569,76,18,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,173,172,166,1,0,0,0,0,128,0,-1--1--1,,1|(1955,492)|
1,174,172,167,1,0,0,0,0,128,0,-1--1--1,,1|(1806,607)|

10,175,"Delayed Discrete Actual Real Lifetime Utility (DARLU)",2209,766,73,27,8,3,0,0,0,0,0,0,0,0,0,0,0,0,0
1,176,147,175,1,0,0,0,0,128,0,-1--1--1,,1|(2065,795)|
10,177,TIME STEP,2148,838,40,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0,0,0
1,178,177,175,0,0,0,0,0,64,0,-1--1--1,,1|(2166,815)|
10,179,"Actual Current Consumption (ACC)",2056,411,65,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0,0
10,180,"Delayed Actual Current Consumption (ACC)",2040,232,72,18,8,3,0,0,-1,0,0,0,0,0,0,0,0,0,0
1,181,180,179,1,0,0,0,0,64,0,-1--1--1,,1|(2093,298)|
10,182,"Actual Current Consumption (C)",1843,287,60,18,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0,0,0
1,183,182,180,1,0,0,0,0,128,0,-1--1--1,,1|(1918,242)|
1,184,182,179,1,0,0,0,0,128,0,-1--1--1,,1|(1949,371)|
1,185,179,171,1,0,0,0,0,128,0,-1--1--1,,1|(2133,538)|
10,186,TIME STEP,1911,168,40,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0,0,0
1,187,186,180,0,0,0,0,0,64,0,-1--1--1,,1|(1960,192)|
1,188,147,171,1,0,0,0,0,128,0,-1--1--1,,1|(2044,735)|
1,189,76,140,1,0,0,0,0,128,0,-1--1--1,,1|(402,604)|
10,190,INITIAL TIME,2204,343,48,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0,0,0
1,191,190,179,0,0,0,0,0,64,0,-1--1--1,,1|(2145,370)|
10,192,Time,2192,452,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0,0,0
1,193,192,179,0,0,0,0,0,64,0,-1--1--1,,1|(2148,439)|
10,194,INITIAL TIME,656,980,48,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0,0,0,0
10,195,Exponential Discounting t,1,955,971,50,28,3,131,0,0,0,0,0,0,0,0,0,0,0,0,0
12,196,48,1211,975,10,8,0,3,0,0,-1,0,0,0,0,0,0,0,0,0,0
1,197,199,195,4,0,0,22,0,0,0,-1--1--1,,1|(1056,976)|
1,198,199,196,100,0,0,22,0,0,0,-1--1--1,,1|(1160,976)|
11,199,48,1113,976,6,8,34,3,0,0,3,0,0,0,0,0,0,0,0,0,0
10,200,Chge in Exponential Discounting t,1,1113,950,62,18,40,3,0,0,-1,0,0,0,0,0,0,0,0,0,0
10,201,Lagged Exponential Discounting t,1,950,1072,62,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0,0
10,202,"Exponential Discounting t - 1",795,1022,58,19,8,131,0,0,0,0,0,0,0,0,0,0,0,0,0
10,203,Exponential Discounting t,978,1138,53,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0,0
1,204,195,199,1,0,0,0,0,128,0,-1--1--1,,1|(1030,1009)|
1,205,195,201,1,0,0,0,0,128,0,-1--1--1,,1|(961,1017)|
1,206,201,202,1,0,0,0,0,128,0,-1--1--1,,1|(837,1071)|
1,207,195,202,1,0,0,0,0,128,0,-1--1--1,,1|(832,974)|
1,208,202,203,1,0,0,0,0,128,0,-1--1--1,,1|(840,1117)|
1,209,203,199,1,0,0,0,0,128,0,-1--1--1,,1|(1100,1045)|

10,210,Initial Exponential Discounting t 1,975,878,57,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0,0
1,211,210,195,0,0,0,0,128,1,-1--1--1,,1|(968,912)|
10,212,"Quasi-Hyperbolic Discounting",584,1049,55,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0
10,213,Time,721,1096,24,10,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,214,213,212,1,1,0,0,0,64,0,-1--1--1,,1|(641,1087)|
10,215,Time,1207,874,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,216,215,200,1,0,0,0,0,64,0,-1--1--1,,1|(1178,910)|
1,217,194,212,1,0,0,0,0,128,0,-1--1--1,,1|(628,1010)|
1,218,213,202,1,1,0,0,0,128,0,-1--1--1,,1|(752,1071)|
10,219,TIME STEP,1107,852,40,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,220,219,200,0,0,0,0,0,64,0,-1--1--1,,1|(1108,890)|
1,221,1,203,1,0,0,0,0,128,0,-1--1--1,,1|(1070,1157)|
1,222,212,18,1,0,0,0,0,128,0,-1--1--1,,1|(508,989)|
1,223,170,212,1,0,0,0,0,128,0,-1--1--1,,1|(509,1089)|
1,224,203,212,1,0,0,0,0,128,0,-1--1--1,,1|(790,1189)|
\\---// Sketch information - do not modify anything except names
V300 Do not put anything below this section - it will be ignored
*Outcomes
\$192-192-192,0,Open Sans|10||0-0-0|0-0-0|0-0-255|-1--1--1|-1--1--1|96,96,74,0
10,1,Normalized Lifetime Utility,528,965,46,18,8,3,0,0,0,0,0,0,0,0,0,0,0,0
10,2,Normalized Consumption Growth,966,902,69,18,8,3,0,0,0,0,0,0,0,0,0,0,0
10,3,Optimal Consumption Growth Rate,831,1037,69,27,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-
128-128,0,0,0,0,0,0
1,4,3,2,1,0,0,0,0,128,0,-1--1--1,,1|(865,973)|
10,5,FINAL TIME,528,876,44,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,6,5,1,0,0,0,0,0,64,0,-1--1--1,,1|(528,909)|
10,7,Time,419,918,24,10,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0,0
1,8,7,1,0,0,0,0,0,64,0,-1--1--1,,1|(457,934)|
10,9,Unconstrained Consumption Growth,893,668,72,18,8,2,1,3,-1,0,0,0,128-128-128,0-0-0,|10||128-
128-128,0,0,0,0,0,0
10,10,Unconstrained Consumption Growth Rate,1090,1038,69,27,8,2,0,3,-1,0,0,0,128-128-128,0-0-
0,|10||128-128-128,0,0,0,0,0,0
1,11,10,2,1,0,0,0,0,128,0,-1--1--1,,1|(1050,951)|
12,12,0,1482,407,280,135,3,188,0,0,1,0,0,0,0,0,0,0,0
Lifetime_Utility
12,13,0,1480,124,280,108,3,188,0,0,1,0,0,0,0,0,0,0,0
Optimal_&_Biased_Values
12,14,0,1486,758,286,175,3,188,0,0,1,0,0,0,0,0,0,0,0

Constants

12,15,0,338,194,259,192,3,188,0,0,1,0,0,0,0,0,0,0,0,0

Consumption

12,16,0,874,195,254,195,3,188,0,0,1,0,0,0,0,0,0,0,0,0

Wealth

12,17,0,873,616,259,207,3,188,0,0,1,0,0,0,0,0,0,0,0,0

Lifetime_Utility_Consumption

12,18,0,2108,836,316,254,3,188,0,0,1,0,0,0,0,0,0,0,0,0

Real_Lifetime_Utility

12,19,0,334,616,262,205,3,188,0,0,1,0,0,0,0,0,0,0,0,0

Optimal_Lifetime_Utility

10,20,"Consumption (C)",264,959,56,10,8,3,0,0,0,0,0,0,0,0,0,0,0

10,21,"Biased Current Consumption (BCC)",277,862,72,29,8,130,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0

1,22,21,20,1,0,0,0,0,128,0,-1--1--1,,1|(289,915)|

10,23,"Current Consumption (CC)",220,1042,65,18,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0

1,24,23,20,1,0,0,0,0,128,0,-1--1--1,,1|(222,995)|

12,25,0,2106,281,315,262,3,188,0,0,1,0,0,0,0,0,0,0,0,0

Continuous_Consumption

10,26,Optimal Lifetime Utility,432,1063,56,18,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0

10,27,Actual Lifetime Utility,611,1067,50,18,8,2,0,3,-1,0,0,0,128-128-128,0-0-0,|10||128-128-128,0,0,0,0,0

1,28,26,1,1,0,0,0,0,128,0,-1--1--1,,1|(452,1016)|

1,29,27,1,1,0,0,0,0,128,0,-1--1--1,,1|(597,1013)|