Suppose Abe has utility, $U$, equal to $2\sqrt{I}$, where $I =$ income. Abe has two (equally likely) possibilities for income: either $I = $500 or $I = $1000.

a) What are $E(I)$, $Var(I)$, and $E(U)$ for Abe? $E(U) = y$ in Figure 1.
b) If Abe could receive a certain income, $z$ in Figure 1, what must $z$ equal to make him indifferent to the uncertain income given above? What is Abe’s risk premium ($R$)?

Why do Open Source (OS) programmers spend time on OS when they are not compensated for this time, & why do for-profit companies support OS programs that may compete with the companies’ programs? What are the implications for OS programmers’ behavior if the OS programs are substitutes or complements to commercial programs?

How do price premiums signal high product quality? What are the implications for profit for high quality sellers? Discuss moral hazard and adverse selection.

Suppose Jane is smart & Tarzan is not smart. She may be able to demonstrate this by engaging in some activity, $y$, that has a lower cost per unit for her than for Tarzan. Firms will hire smart individuals for $20 & others for $10. Jane’s cost of signaling is $y/2$, & Tarzan’s cost is $y$.

If firms believe those with $y \geq y^*$ are smart, & those with $y < y^*$ are not smart, how could a signaling equilibrium occur, and what does such an equilibrium entail? Explain when pooling may occur, assuming $\alpha$ is believed to be the share of smart individuals in the population.

Figure 1

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U, E(U)

x
y

500  z  750  1000

U
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