Rationality and the Adolescent Mind

I. Introduction

Why do teen-agers do such stupid things?

1. “thin” theories of rationality

-emphasize coherence of actions, given existing beliefs and desires

-don’t evaluate or critique nature of those beliefs or desires

Commonly held presumptions:

1. adolescents tend to underestimate probability of major risk
2. they feel invulnerable

leads to one particular view of adolescent decision-making: engaging in high-risk behavior is rational for them. Economics view that people are actively calculating optimal choice within known parameters. They make decisions consistent with the information available to them. May be wrong, but not irrational.

Problem is that research shows that teen-agers DON’T underestimate risk or feel invulnerable.

2. “Broad” views of rationality

-content of beliefs, desires is subject to evaluation

-this view suggests they act irrationally: “many adolescents making poor choices are alienated from choices they make. People who take unhealthy risks often agree that their behavior is irrational.

-“multiple minds” theory

II. Background & Perspectives

Adolescence is a dangerous time- teenagers more likely to engage in risky behaviors

A. Stats:
more than half of all new HIV cases occur in people younger than 25.

Behaviors that affect adult health become entrenched during adolescence: risky behaviors beginning as voluntary experimentation can progress to addiction.

Preventing risky behavior while still voluntary choice is critical. Yet many interventions fail.

Need to know WHY adolescents make risky choices.

B. Anatomical Changes

-fMRI studies suggest that brain is remodeled during childhood and throughout teen years.

-these anatomical changes may account for risk-taking, novelty seeking, impulsivity that characterize adolescent behavior.
- Risk-Taking may be hard-wired

Prefrontal areas are involved in controlling impulsivity; making decisions based on long-term consequences, rather than immediate gratification.
C. Assumptions behind Traditional Intervention Programs

-emphasize giving teens information about risks and allowing them freedom to decide what to do.

-just tell them risks about HIV infection, unwanted pregnancy, drug use, etc. and they will see the light.

-expect that teens will weigh risks and benefits and come to “rational” decision

-limited success

Reyna, et al propose this view is inherently flawed:

-still developing brain keeps teens from thinking like adults

-they don’t fail to weigh risks against benefits- in fact they tend to weight benefits more heavily than risks

-based on notion that teens consider themselves invincible – evidence suggests the complete opposite

D. The Invulnerability Myth

-Assumption: teens drive too fast, etc because they feel they are invulnerable

-they must, them be underestimating risk, or they wouldn’t take such chances

-in fact, adults consider themselves more invulnerable than teens and teens tend to overestimate risk.
Example: Teens dramatically overestimate risks of Earthquake

HIV from unprotected Sex

STD like Chlamydia

“die from any cause in the next year or by age 20”

Overestimation declines after early adolescence: -suggests that engaging in risk-taking without consequences produces complacency
Why do teens engage in risky behaviors if they feel vulnerable?

- perceived benefits seen to outweigh and offset perceived risks.
- perceived benefits is a better predictor of drug and alcohol use 6 months later than perceived risk.

Thus, Traditional intervention fails because teens already feel vulnerable and overestimate risks
- fail to alert teens about allure of benefits
- may actually encourage risky behavior

Ex: teen sees risk of HIV at 50/50 from unprotected sex
- then learns that actual risk is 1/500 at most.

E. Fuzzy-Trace Theory

- doesn’t teach teens to rationally balance costs/benefits
- training them to think more intuitively, like mature adults do.
Dual Process Theory:
-says that there are 2 ways of reasoning to come to conclusion:
  deliberative, analytical, verbatim
  involves calculation
  intuitive, unconscious

-Each predominates at different stages of human development
1. Verbatim reigns during childhood

  3. Intuitive takes over with experience, maturity, expertise

**PREDICTS:**
-mature decision-makers will not deliberate about degree of risk and magnitude of benefits if nontrivial chance of catastrophic of health-compromising event may occur.

-analytical approach will take longer

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**F. Two Routes to Risk**

1. **Risky deliberators:**
- vast majority of teens

-trade off risks vs. benefits

-tend to come to conclusion that is, to the, completely rational

Russian roulette example:
-should the number of bullets (or money to be earned as in The deer Hunter) matter in deciding whether to play Russian Roulette?
“rational” calculation: if pay-off was high enough and only 1 bullet

-adult: “are you crazy”? This is not about number of bullets or money- we’re talking significant risk of dying.

-gist-based thinking to cut through distractions

-interventions should focus on changing cognitions:

-positive gists of healthy behaviors; negative gists of unhealthy behaviors

-reduce perceived benefits of risky behavior; increased perceived benefits of healthy behaviors

-teens don’t grasp concept of “harmful consequences” due to lack of relevant experience( may make them more prone to engage in behavior- because they have managed to “dodge the bullet”

2. Risky reactor:

-grow out of impulsiveness once they reach adulthood

-pulled into risky decisions because of peer pressure excitement of moment, against better judgment

-not helped by promoting intuitive thinking

-interventions should focus on adult supervision or monitoring

General Recommendations;

-remove opportunity to engage in risky behavior

- implement higher drinking age, decrease number of peers in car with new drivers, reduce exposure to addicting substances