

Addiction: A Problem of Motivation, Free Will, or Self-Destructive Behavior?

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Why Addiction is Interesting

- Practical: societal, individual problems
- Conceptual: challenge to theories
 - Motivation
 - Volition, self-control, free will

Addiction as Self-Destructive

- Some addictions have bad consequences
 - Gambling: debts, financial loss
 - Cigarettes, alcohol: health damage, early death
 - Alcohol, drugs: also health costs, bad decisions, violence & crime, traffic accidents
 - Secondary costs: family disruption, work (under)performance
- Other addictions are more innocuous
 - Caffeine, video games

Addiction as Self-Destructive

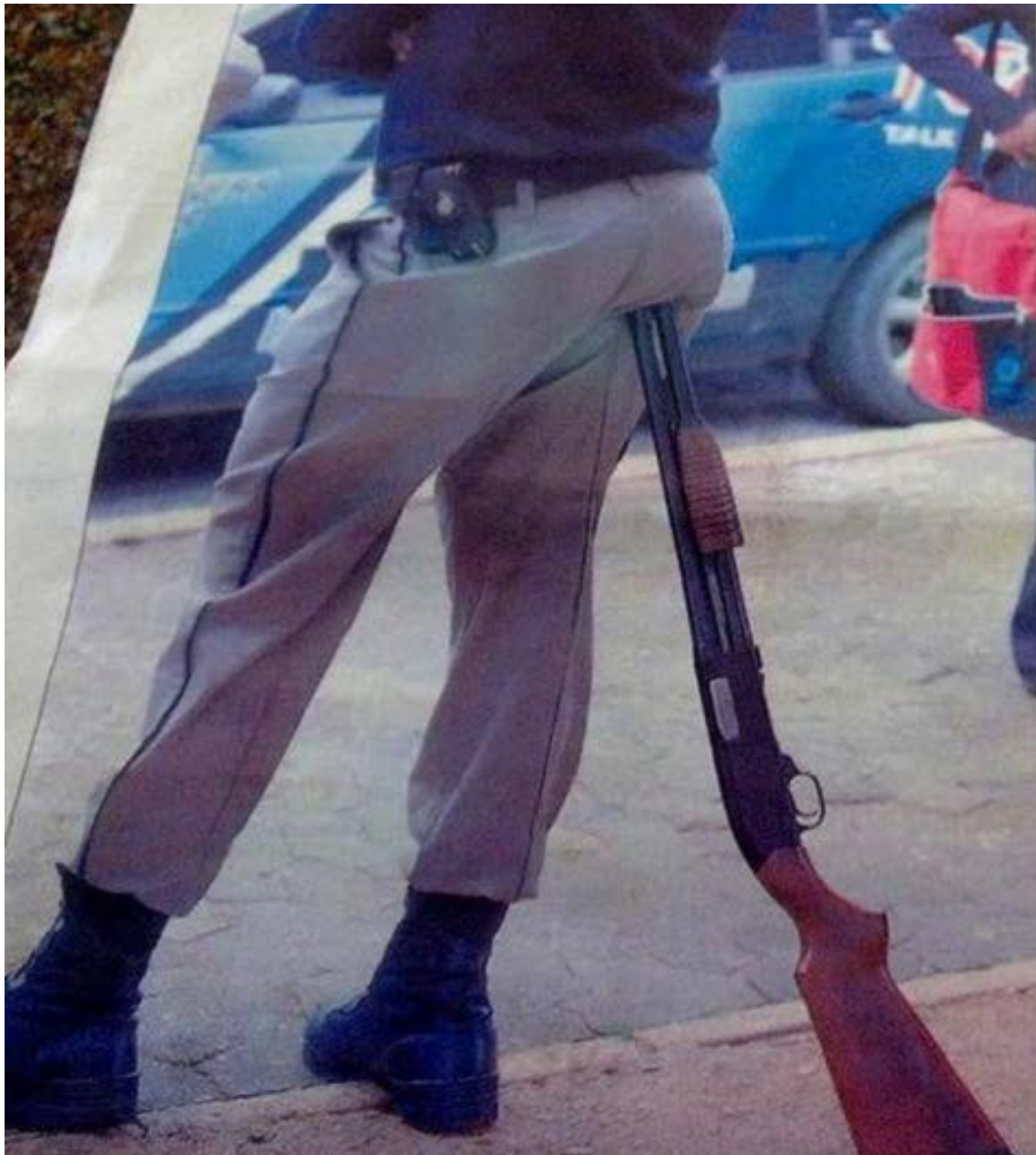
- Thus, some but not all addictions bring long-term costs to the addict
- If they outweigh the benefits, then the behavior is self-destructive /self-defeating
- Psychology of self-defeating behavior can shed light on why people do it

Self-Defeating Behavior

- Rationality is pursuit of enlightened self-interest
- What forms does it take?
- Primary, deliberate inflicting cost or harm to self
 - (Not much)
- Backfiring strategies
- **Tradeoffs**

Primary Self-Destruction?

- Do some people gamble to seek out the negative experience of losing lots of money?
 - Self deserves to suffer
 - Guilty
 - Self is bad
- Such evidence would be valuable contribution, given general lack of evidence for primary self-destruction



Jobbing - dumbest policeman?

PHOTO: Disbelief, disgust is the reaction

ALESSIA TISSEN

"THIS image should be used by the police force in their training manual as an example of how not to handle a firearm," said Dr Johan Burger of the Institute of Security Studies.

He and other members of various organisations have expressed their absolute disbelief, shock and disgust at a photograph captured by a photographer from *The Citizen* showing the handling of a shotgun by a Johannesburg Metro Police officer outside the University of Johannesburg on Thursday during a student protest.

Burger said the image was "one of the stupidest examples of gun handling I've seen in a long time", adding it showed a complete lack of understanding and training in the safe handling of a weapon.

"There definitely should be some kind of action taken against this officer - even if it's just a refresher course. This example demonstrates poor training, negligence and total recklessness and does not provide a good example, especially for civilians, on how to treat and respect firearms."

Burger added the liability for the officer and his employer were huge should the firearm have gone off.

"Even if the gun was made safe, mistakes can happen and people can be hurt or killed. Any well trained person knows not to do such a thing," he said.

Snip

"This officer should be declared unfit to handle a firearm. This is a prime example of a lack of supervision, training and discipline."

unfit and should not be allowed to handle a firearm.

"This is a prime example of a lack of supervision, discipline."

"The consequence of this behaviour is a major one. These are the people meant to be policing the owners. Gun safety is not there are no variables."

Gun Free South Africa's Crowsley said this was a serious concern.

"The police force should be used to build public confidence, such an example by an officer does not help," she said.

Crowsley added that the police officers were going to lobby for legislation, such as a ban on open carry, to be strictly controlled.

Johannesburg's spokesman Chabane Wayne Minna said the officer displayed in the photo would "definitely be disciplined."

"Sitting on the ground with a shotgun is a very unprofessional and unsafe practice," he said.

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Backfiring Strategies

- Usually some basic mistake about self or world
- E.g., choking under pressure, flattering big shots, good money after bad
- Generally not that relevant to addiction?
- Gambling: Might people believe that gambling is a legitimate and effective way to make money?

Self-Defeating Tradeoffs

- Pursuing the good, but something bad comes with it
- Thus, pursuing something positive
- Bad outweighs the good
- Short-term gain, long-term cost
- Definite gain, merely probable cost
- Ainslie (2000): Always rational to have one more cigarette?

Emotion and Self-Defeating Behavior

- Foolish risk taking
- Tradeoff: High risk, high payoff, vs. play it safe
- Lottery Choice procedure
 - 2% chance of winning \$25
 - Vs. 70% chance of winning \$2
 - Losing carried costs (noise stress)
- Cash expected value \$1.40 vs. \$0.50
- Thus, choosing the \$25 is irrational, self-defeating

Emotion and Self-Defeating Behavior

- Foolish risk taking
- Tradeoff: High risk, high payoff, vs. play it safe
- High arousal negative emotion
 - Anger, embarrassment, etc.
- More to gain, less to lose?
- Fail to consider downside, focus on big payoff

Leith & Baumeister, JPSP, 1996

Thus: Risk Factors for Self-Destructive Behavior

- High arousal negative emotion
 - High energy bad feeling
 - Desire for positive outcome
- Failed self-regulation
 - Not considering negative possible consequences

Addiction as Dysfunctional Motivational Hierarchy

- Short-term versus long-term
- Allure of pleasure
- Emotion, stress, intoxication increase short-term focus

Addiction: Motivation or Volition?

- Special case of motivation?
 - or perhaps a more extreme desire?
- Control of action is lost, or recruited to serve the addiction?

Addiction as Change in Motivation

- Motivation: Wanting, also liking
- Acquiring addiction, often self-regulate to enable indulgence
- Getting begets wanting: reinforcement of desire

Addiction as Change in Volition

- Brain disease model
- Loss of free will
- Public perception: doing more than wanting
- In particular: Want to quit but fail to quit

Free Will?

- Problem of competing definitions
- Not all or nothing
- Responsible autonomy
- Advanced form of action control
- Conscious choice
- Integrates across time
- Limited energy supply

Loss of Free Will

- Suggested by desiring to quit yet failing to quit
- Or by quit and relapse
 - Though perhaps change mind?

One Possible Integration

- Irresistible Urges
- Addiction is super strong motivation
- Volition cannot do other than to obey and serve
 - “Can’t help it, can’t stop”

Irresistible Cravings

- (People believe this, but it is wrong)

Evidence: Lay Opinion

- People who ever drank alcohol daily believed less in free will than other people
 - Both personal free will and general free will
- People who had been daily drinkers but had quit alcohol believed more in free will than others
- People who tried to quit but failed believed less in free will
- Similar for other drug addictions
- “it’s not my fault”

Vonasch et al. (2017) Addictive Behaviors Reports

Getting mushrooms

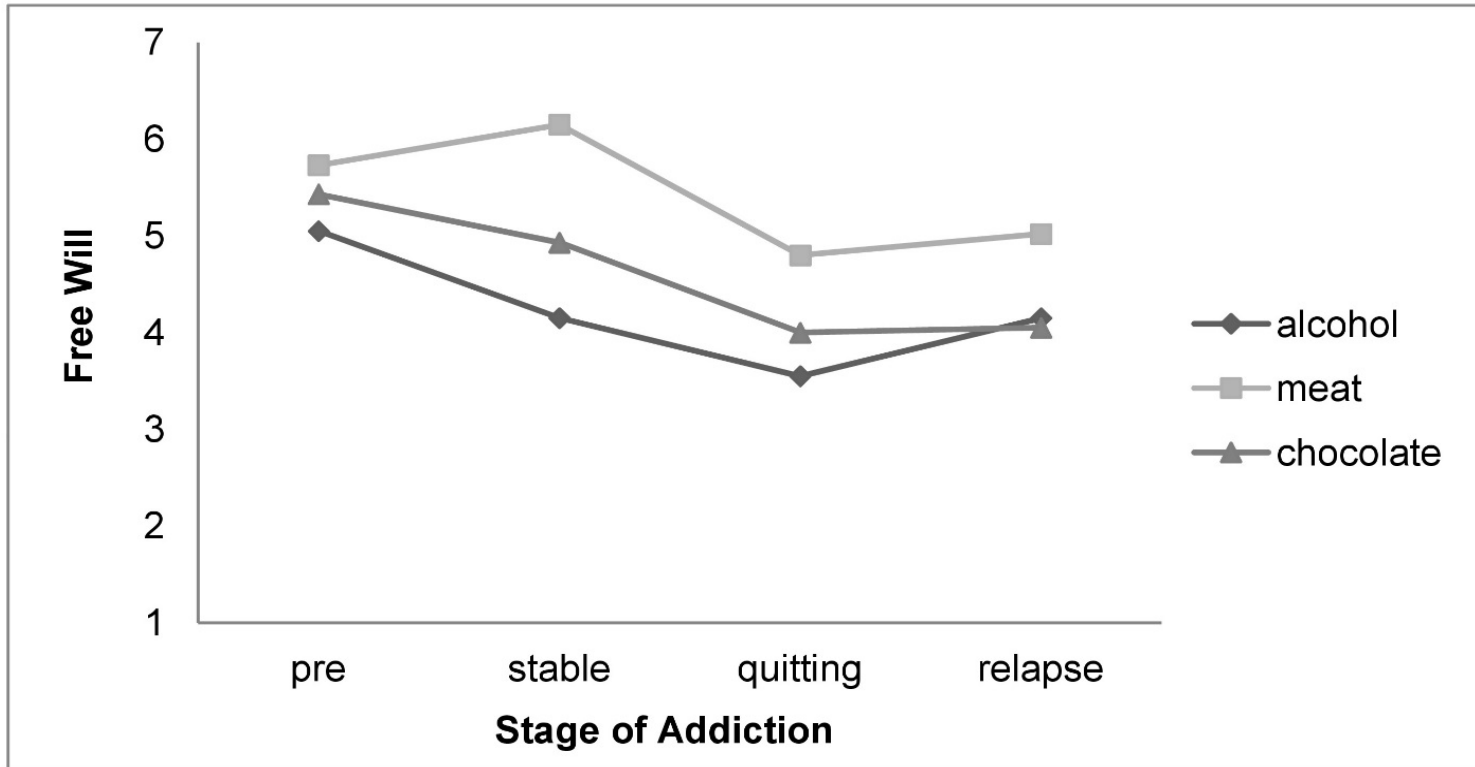
- ‘Mary drove recklessly’ to get mushrooms – chanterelle (dinner) or psychedelic (drug)
- Less free will if drug was motivator, even though she was sober at time

Was Consumption Freely Willed?

Stages of Addiction

- Overall:
 - meat, yes;
 - alcohol, chocolate, not so much
- First time, any of above: yes
- Stable, regular use: no
- Quitting, even less
- Relapse, also low

Freedom in Stages



Reflecting on Personal Experience

- Randomly assigned to write about either succumbing or resisting something (could be addiction or strong temptation)
 - Diets, unhealthy eating, overspending, sex, alcohol, cigarettes, drugs
- Then rated personal free will belief
- **Less free will belief after recalling succumbing than resisting**
- Thus, recalling past episode of giving in reduced current belief in own free will

Follow-Up: Autobiographical Reflections

- Wrote about experience giving in to temptation/addiction, randomly assigned: either had bad consequences or not
 - Topics were similar (drugs, cigarettes, etc.)
- Rated own free will and personal control at that time as **lower when consequences were bad** than good
- Suggests disbelief in free will is motivated by wish to escape responsibility for bad consequences.

Reversing the Causal Arrow

- Induce disbelief in free will, or not
- (Ostensibly separate study) rated how addictive are gambling, video games, coffee, shopping, marijuana, sex, alcohol, cigarettes, social media, porn, television, etc
- Low belief in free will led to higher ratings of these as addictive

Conclusions:

Popular (Non-Expert) Opinion

- People associate addiction with loss of free will
- Patterns of belief vary and are self-serving
 - Believe in control: hold people responsible
 - Believe in loss of free will (e.g., disease): not responsible
 - Different patterns appeal to different people

Vonasch et al. (2017) Addictive Behaviors Reports

But...

- Close and skeptical examination of smoking literature
- Smoking is sometimes rated as most difficult addiction
- Do cigarette addicts lose free will?
- Reasons for skepticism...

Stereotypes are Sometimes Wrong

- Data based on addicts in inpatient treatment
- Higher comorbidity
- Informed & expert opinion
 - Addicts
 - Paid treatment providers
 - Volunteer treatment providers
 - Researchers

How Hard are the Data?

- “The only evidence we have that people can’t stop is people say they can’t stop...”
 - Russell & Davies, 2009

Is Smoking Voluntary Behavior?

- Uses voluntary muscles
- Not reflexes, other involuntary responses
 - Cf. sudden onset vomiting
- Planning, premeditation
- Adjustment, adaptation

Can People Quit?

- Most people who have ever smoked have quit
- Many people quit repeatedly
- Majority quit without professional help
- Note some anti-quit data based on atypical samples
- So...

Can People Quit?

- Yes !

Why Don't People Quit?

- Will revisit in integrative theory at end
- But for now, data from smoking
- Note Volpp cited data, each year 2-3% succeed at permanent quitting, but 70% say they want to quit
 - Though it depends on how the question is posed
- Many more quit but eventually relapse

Why Do People Smoke?

Major Benefits...

- Brief euphoria
- Improved cognitive function
- Diminished appetite
- Arousal

- *In other words...*

Why Do People Smoke?

In other words...

- You're happier
- You're smarter
- You're slimmer
- You have more energy

Why Don't People Quit?

- Multiple reasons and causes
- Overestimate difficulty of quitting
 - Assume cravings will escalate
- No compelling reason
 - Volpp study, money for abstaining
 - 20% relapse after money stopped
 - Aging heavy smokers?
 - Animal studies, Rat Park

Why Don't People Quit?

- ***Self-report (Fidler & West 2009):***
- Enjoyment of smoking
- Relief from stress
- Men: enjoyment of smoking, and being a smoker
- Women: relief from stress, and weight control
- Young: socializing
- Old: pain relief
- The more reasons you had, the more addicted

Not Reasons

- ***Fidler & West (2009) continued...***
- Did not say they were unable to stop
 - Could be defensive, not admitting it
- Did not express fear of withdrawal
 - At most: 10% said “I feel bad when I try to quit”
(as reason)

After Quitting, Why Relapse?

- Beliefs: that smoking would reduce stress, and that oneself won't be able to cope with stress without smoking
- Beliefs: that urges will grow ever stronger
 - They don't actually
 - **Urges are weak...** but frequent
- But: they change from pleasant to unpleasant (Sayette & Hufford, 1995) `

Lapse Promotes Relapse

- Not deterministically
 - Cf. AA
 - Zero tolerance policies
- Average 29 lapses before full smoking relapse
 - Likely less for other addictions
 - Symptom, harbinger ... or cause?
- Experiment: Lapse *causes* relapse
 - Shadel et al. (2011)
- Rediscovering the habit of pleasure

What Then Should We Conclude?

Debating Free Will

- Addictive behavior uses voluntary muscles
- Can be stopped at any point
- Urges are not irresistible
 - This is key. On every occasion, the addict could abstain.
- Instead, of abstaining, free action is used to help oneself indulge

Voluntary but Habitual Movements

- Pulling the arm of a slot machine, or lighting up a cigarette, or pouring oneself a drink, is using voluntary muscles
 - So it is voluntary
- ***But*** voluntary muscles can be coopted by habit, which tells voluntary muscles what to do, unless there is override

What About Free Will in Addiction?

- Voluntary action remains intact
- But now indulging is the default
 - Free will plays a **supporting role**, helping as needed
- Free will is needed to override
 - Otherwise it cooperates to facilitate indulging
 - This is not trivial
 - Gamblers make many decisions, etc.
 - Abstinence requires saying no to oneself over and over
- Resistance is depleting, and weaker when depleted

Stereotype Vs. Reality

- Stereotype of addict is struggling to quit but feeling overpowering cravings
- Reality is addicts experience just a steady stream of weak desires, impulses, habits. Cravings are weak and resistible – but there are just so many of them.

Disease of Free Will?

- Free will is retained
- Lost in macro if retained in micro?
 - fail to do what you end up wishing you had done
 - Self as progressive integration across time?
- Report desire to quit but many failures at quitting
 - though most succeed eventually
- Remain functioning in other areas of life
(especially see cigarette addicts, often highly successful in social and occupational spheres)

- It's not because the addict can't resist the urge to indulge
- It's because he *can* resist it – but has to use limited willpower resources to do it. Over and over and over.

Ego Depletion

- Willpower is limited
- Overriding lots of weak impulses depletes willpower
- Other demands may make resistance low
- High chance of lapse when ego depletion randomly coincides with stronger urge or impulse

Intensified Feelings

- Ego depletion intensifies feelings & desires
 - So when willpower is low, desire to indulge will feel stronger than usual
 - Also emotional impact will be magnified

Implications of Ego Depletion for Addiction

- Resistance will be extra low when other demands deplete the self, such as stress
- Resisting will deplete the self
 - Feelings will be stronger
- Note recipe for self-defeating behavior:
 - Strong negative feelings, failure to consider consequences, desire for strong positive feelings, ignore downside of risk

Addiction as Habit

- Activated by cues
 - Addicts supply themselves more cues
- Requires conscious override (costly), becomes the default
- Cigarette vs. heroin addiction
 - More frequent, more ritualized indulgence

Habit: Process or Outcome?

- Some addictions have attractive process
 - Others not
 - Compare gambling, smoking, vs. marijuana, heroin
 - Alcohol: pleasure of taste vs. inebriation
 - Gambling addiction is of particular interest, because can be linked to either process or outcome
- Rituals enhance pleasure (Vohs et al., 2013)

Integration

- Separate effects on liking, wanting, doing
- And perhaps separate attachments to delivery process and to outcome
- Addiction changes these, separate changes

Liking

- Discovery of new pleasure
- Most addictions are things that bring pleasure
 - Question of addiction without liking, joyless use
- Two possible sources of pleasure
 - Liking the end state (being intoxicated, winning money)
 - Liking the process (enjoying the taste, enjoying the betting or game)

Wanting

- Central change of addiction
- Acquires new pattern of wanting
- Reinforcement of desiring (getting begets wanting)
- Based on liking / pleasure
- But impulses are weak, not strong

Doing

- Form habit of using
- Habit may be self-sustaining, or respond to external cues
 - Needs to be activated either by inner motivation (cravings) or external cues
- Not loss of free will
 - The changes are in automatic, not controlled responses

Why Addicts Relapse

- Addiction has three separate effects,
 - not necessarily the ones in prevailing stereotypes of addiction, such as loss of free will
 - Liking, wanting, doing
- Therapists and counselors might help with one of the three – but either of the others can undermine
 - Cause a lapse
 - Lapse leads to relapse

Tempted to Lapse

- Wish to feel good
- Especially when needing a boost
- Withdrawal is unpleasant
- Resistance is low (depleted resources): stress, other negativity
- Addict cannot stop wanting to indulge, missing the pleasures, can't stop having mild urges

Conclusion: Addiction and Motivation

- Discovery of a new pleasure, and how to get it regularly
- Desire increases with frequent satisfactions
- When quitting, desire drops but does not go away, and some desires, like for cigarettes, have many activating cues.
 - Having to say no to self over and over.

Conclusion: Addiction and Volition

- Formation of habit
 - Not free will/conscious control, but automatic process, that changes with addiction
- Breaking it requires effortful override, depletes resources
- Free will remains intact, though weakened by extra depletion (more than just the not-smoking; also control own irritability, etc.)

Conclusion: Struggling with Addiction

- Sustained in multiple ways
- Hard to quit because multiple things cause lapse; and lapse causes relapse
- Each addiction is different combination
 - of process and outcome, and
 - of liking, wanting, & doing

The End