

Managing our vices

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1. Purpose and scope

Typical vices include eating or drinking something in an unhealthy quantity, putting off doing something important because it is difficult or boring, spending hours per day computer gaming or watching entertaining videos, taking psychoactive substances, and unwise sexual acts.

Just over 40% of all deaths in the USA are due to these vices (according to statistical estimates by Keeney, 2008). A similar portion is probably true for most other developed countries. Of course, death is only one of the negative consequences involved.

People sometimes carry out these self-destructive behaviours because they do not see the drawbacks. Or they may be misled by biasing factors. Ideally, we would like to avoid vices without effort. More often we wrestle with temptation.

Temptation occurs when we are trying to decide what to do but there are strong biasing factors. Typically, the positive effects of an action would be experienced quickly but the negative effects would come later, making them seem less important. Often, we suffer internal conflict because our feelings tell us we want to do an action but we know or suspect it is unwise.

This article is about managing our vices, which often involves taking those potentially biased decisions in a much better way. The aim is to make better choices consistently with less difficulty and stress.

Where the article gives advice, it is most likely to be helpful to people who are intelligent and mostly rational. It will require careful study and re-reading.

I don't assume people are rational but I do think most of us can be rational most of the time if we try. We do especially well in repeating situations that allow learning. I also think rational behaviours are more robust and stable than irrational behaviours, which may be abandoned if we realize our mistake.

2. Vices and decision making

This section describes three levels of participation in vices, defined partly by the level of internal conflict experienced.

2.1 Unrestrained vice

Sometimes people carry out a vice with little thought and no internal conflict. They simply eat the unhealthy snack or light a cigarette without considering the negative consequences. This may be because:

- They do not consider the behaviour to be a vice, or do not consider it a vice in situations like the current one.
- They consider the behaviour to be a vice but, on this occasion, do not recall this view.

Some people with severe vices do not consider their behaviour to be mistaken. They are delusional about their situation, even ignoring obvious signs of harm already done to them by their bad behaviour.

E.g. McLennan et al (1998) used data from a questionnaire completed by thousands of young people in the USA. Of these, 13.4% were classified as heavy drinkers. This meant they had got drunk or had 5 consecutive drinks at least twice a month over the past 6 months. When asked if they had an alcohol or drug problem only 15.9% of these heavy drinkers said they did. That means that 84.1% of them were wrong and drinking without realizing their mistake. Those that admitted their problem on average saw more social negative consequences of alcohol yet, oddly, had more positive perceptions of the psychoactive effects of alcohol.

2.1.1 Ignorance

One possible reason for unrestrained behaviour is ignorance. We just don't know it's bad for us or we don't know

about a particular bad consequence. Advances in science can help.

E.g. In the early 20th century many people in the UK smoked tobacco. It must have been obvious, even then, that this was an unpleasant habit and likely to be unhealthy. Surely anything involving breathing in smoke is going to be risky. Most people who try it for the first time find it unpleasant and it is only with social pressure that they become accustomed to it.

However, in the mid-20th century the strong link between smoking tobacco and dying of lung cancer was discovered. As more and more people became aware of that link and convinced it was real, the knowledge supporting decisions to stop smoking (or not start) improved.

On other occasions many people know the behaviour is bad but some individuals do not.

E.g. It is likely most drinkers are unaware of most of the scientifically proven health effects of alcohol because there are so many and the latest research is less well known. The latest research indicates that the healthiest level of alcohol consumption is zero. The idea that moderate alcohol is good for you is now known to be wrong. Although some diseases may be slightly less common if you drink, this is outweighed by the many diseases that are more common. Long term, alcohol causes problems in almost every organ. Brain damage is worst for young people because their brains have not fully developed and are more vulnerable, especially to binge drinking. Alcohol causes cancer and cardiovascular disease. Wikipedia offers several useful pages on this topic that are updated with new information.

2.1.2 Bias

Sometimes we know about a bad consequence but faulty thinking leads us to discount it. Unwilling to take on the challenge of stopping the vice we may search for reasons to disbelieve information about its drawbacks. We may believe lies by others. We may construct a conspiracy theory that allows us to ignore evidence, thinking it is fake.

Some young people start a vice because they believe claims that it is harmless or even beneficial.

2.2 Temptation

Very often the prospect of carrying out the vice causes internal conflict because we are aware of potential drawbacks or a decision made in the past to avoid the vice. This is the experience of temptation.

Situations where temptation occurs typically have three challenging elements:

- There is, or seems to be, genuine uncertainty as to the best course of action.
- Our thinking is threatened by biasing factors.
- Circumstances vary over time, creating occasional spikes of difficulty.

Understanding and managing these elements is helpful. The next three sub-sections discuss them. A final sub-section then defines some types of decision flaw involving temptation.

2.2.1 Uncertainty

If we make poor decisions repeatedly in situations of temptation then the results gradually become clear: obesity, poor health, poor sleep, poor progress in studies or at work, poverty despite a seemingly adequate income, and failed relationships.

However, at the time of taking each decision the best course of action is

usually unclear. It is not the case that the tempting option is clearly wrong while there is an alternative that is clearly wiser. Nor is one option clearly a distraction while the other is plainly 'goal directed'.

E.g. People who use caffeine heavily often think they need it to function. In the short term that is true and taking a dose might be the best course of action before a crucial challenge (e.g. an examination or driving test). The big picture is that they would be better off not using caffeine at all and learning to sleep well. However, just before a crucial challenge may genuinely be a bad time to quit.

E.g. A person out shopping for a hoodie may truly need that hoodie. Perhaps this is the first they have owned and they are desperately short of autumn clothing. At the opposite extreme, they may already have 20 almost identical hoodies. At some point in their journey to 20 hoodies they moved from a justified purchase to needless retail therapy. But when was that?

E.g. I like a bit of chocolate now and then. Most days. A few times a day. The difficulty is in deciding if one more square of chocolate is unhealthy or a tiny treat well within my daily allowances that will have no significant effect on my fat stores or health.

Often, something makes us revisit a decision made in the past.

E.g. Suppose you have made a decision not to eat more than two rectangles of chocolate at lunchtime. However, one day you buy a new type of chocolate bar that looks delicious and it has differently sized rectangles. What now?

E.g. Imagine you have resolved to avoid computer gaming after 10 pm

but now it is your best friend's birthday and he doesn't want to stop. This is different, isn't it?

Sometimes we know we *should* do something, perhaps because it is our fair contribution to a group effort, but we don't *want* to do it. There is conflict between what is fair and what selfishly we would prefer. (It may seem easier to say we are struggling with lack of willpower than to admit that we are not willing to do our fair share.)

Because these decisions involve uncertainty, they are particularly susceptible to bias. Bias is fundamental to the experience of temptation.

2.2.2 Bias

Temptation is experienced during decision-making in the face of biasing factors. These make some of our feelings and thoughts unreliable guides to what is in our best interests. Going with our feelings, 'intuition', or 'gut' will lead to consistently poor decisions.

It helps to understand those biases and how they work. It is hard to avoid biases altogether but not hard to reduce their effects significantly. Here are some important biases.

Time differences

A typical biasing factor is that the positive consequences of the tempting action are experienced almost immediately while the negative consequences are experienced further into the future. It seems easy to weigh those immediate consequences but we may discount the longer-term consequences because, for example either:

- they seem less uncertain;
- we fail to recognize that they will affect us for much longer; or
- we think we have time later to somehow avoid them.

Sensations

Along with the time difference, there are often sensations that strongly remind us of the positive consequences of the tempting action (e.g. delicious food smells, the colourful icon to start a computer game). Sometimes unpleasant sensations drive us towards the tempting action (e.g. feelings of hunger).

The potentially wiser alternative actions usually do not have that advantage.

Cumulative impact

Many of the tempting acts are small individually but have a cumulative impact that is harder to understand. Unhealthy eating is like this.

Often, the impact of a single lapse seems too small to worry about but if we lapsed every time then we would have a major problem.

Evolved precautionary behaviour

Some of our instincts evolved when life was harsher and less certain than it is in a modern, developed country. Instinctively, we are prone to grabbing opportunities immediately as a precaution against them being stolen or lost, and in case hard times follow. This particularly applies to food and sex.

To some extent this is rational. In an unreliable environment immediate consumption may be wise.

E.g. Kidd et al (2013) conducted experiments with children and the classic marshmallow test. Children who saw the experimenter failing to bring a promised better option in an earlier task were more likely to eat the single marshmallow instead of waiting to get two later.

The problem comes where we take precautions that are not necessary, such as piling on fat as a precaution against

starving during a winter or dry season that is no longer a threat.

Artificial chemical influences

Some chemicals we can put into our bodies are the same as, or mimic, naturally occurring brain chemicals. They can make us feel things that are not true (e.g. that we are happy and healthy when we are not).

Simple conditioning

Learning takes place at different levels in the brain. Some is by crude associations and reinforcement, just as in the brain of a lizard. Particular cues become associated with events so that when we perceive the cues we anticipate the events. Particular actions become associated with good or bad outcomes and so we want to do or avoid those actions. We also become more alert to opportunities to do actions with positive associations. For example, we may be quick to notice food, booze, or computer games, and anything associated with them, even when there are many other sights and sounds that could grab our attention.

Problems occur when those associations fail to recognize crucial contingencies. Maybe a particular action does usually bring benefits, but not unless certain specific conditions, ignored by the associative learning, are met. Maybe an association was formed as the result of one important experience (e.g. a major success, a major trauma) but that experience was not typical.

More problems occur when the associations are based only on short-term consequences that the lizard brain easily recognizes, ignoring longer-term consequences.

Our more advanced thinking abilities can often do better than this crude conditioning. We can model the world and its causal relationships, even long-term.

We can make fine distinctions. We can make predictions that are more responsive and accurate than is possible through crude associations.

Simple conditioning may also lead to unnecessary precautionary behaviour.

E.g. Kidd et al (2013) provide an illustration of this idea. A child who lives in a shelter where food is likely to be stolen unless it is grabbed and eaten immediately is less likely to wait than an only child raised by reliable parents who always deliver the treats they promise. This is a mechanism by which a poor home environment might lead someone to take systematically short-term, bad decisions in situations that are more reliable (e.g. at school, at work).

Cognitive errors and deception

Sadly, our higher cognitive abilities are also flawed. We make reasoning mistakes and we can be tricked.

E.g. Unless we use mathematics, we tend to ignore small amounts on the assumption that they will not matter. Sometimes they do because the small amounts accumulate.

Behind most vices is an industry doing its best to overcome our resistance. Some advertising deliberately tricks us rather than merely informing us. Sometimes marketing efforts ignore the best interests of customers to make a sale and beat competitors.

E.g. The gambling industry promotes an activity that is never useful to society. It is happy to endorse efforts to help people with serious gambling problems because they reinforce its marketing messages. The slogan 'I gamble responsibly' supports the myth that gambling responsibly is possible. The slogan 'Stop when the fun stops' supports the idea that gambling is fun

and encourages people to stop on the dangerously subjective basis of fun. Both somehow gain credibility from the link with an independent organization that helps people struggling with gambling.

Familiar and seemingly respectable patterns of reasoning can be flawed. Dodgy logic is often used to rationalize vice.

E.g. A person might think they have a 'right' to smoke.

E.g. After working hard all week in a shop a person might think they deserve to spend some money on themselves, even if it is wasted on goods they do not need.

Sometimes false beliefs about ourselves cause problems.

E.g. A person who believes that their ability to resist temptation is a resource that gets depleted by use may be more likely to give in to temptation after resisting for a period. Job, Dweck, and Walton (2010) demonstrated this in multiple studies including experimental manipulations.

E.g. A person who over-estimates their ability to resist temptation may expose themselves to tempting situations more often, leading to more lapses. Nordgren et al (2009) called this 'restraint bias' and found it in experiments covering academic study planning, snacking, and smoking.

2.2.3 Spikes

Another characteristic of temptation is the occurrence of spikes of decision difficulty.

Background factors affect decisions involving temptation, such as a genetic predisposition to feel hunger strongly or a generally stressful and tiring job. However, as time passes there are typically moments where circumstances

intensify these effects, occasionally producing spikes of difficulty.

Changes may involve:

- The true costs and benefits of different actions.
- The strength of biasing factors.
- Our ability to think.

As already discussed, we may feel we should revisit a decision taken in the past about how to behave because circumstances suggest making an exception.

E.g. Imagine you have decided not to drink alcohol, having previously been a drinker. Usually you have been able to hold to this policy but tonight it is nearly midnight on New Year's Eve. You are at a party and champagne is being poured into glasses for the midnight toasting. A close friend offers you a glass saying, 'I know you don't drink but this is just something for toasting.' Refusing would seem unfriendly. Peer pressure is spiking. You accept the glass on that basis. It is late and you are tired. It is too noisy to think. A minute later and everyone is toasting with their glasses and people around you start to drink. Peer pressure is even stronger. You can smell the drink. The sensation biases you powerfully. You start making excuses for yourself ('It's only one. It's a special occasion. It would be unsociable not to. It will go to waste otherwise.') You take a sip, then empty the glass. Maybe just one more.

Sometimes an exception is truly justified. Sometimes it just seems that way.

2.2.4 Decision quality

Decisions under temptation can be less than perfect in different ways. The terms used in this publication are as follows:

A **lapse** is when a decision under temptation results in a bad choice. This can happen if we fail to deal with the biasing factors.

Giving in to temptation means doing something that is usually a bad choice, while under immediate pressure (i.e. tempted). Giving in can be the right thing to do in some exceptional circumstances. More usually it is a lapse. Often it is hard to know if we have done the right thing but we know we gave in to temptation.

2.3 Effortless virtue

In the best case we experience no internal conflict because we don't even think of carrying out the vice, or brush it aside instantly. Either it has never been something that we do or it was but we are completely over it.

E.g. Most people in the UK find the idea of injecting heroin disgusting and frightening. We associate it with wrecked lives and death. Even if we were feeling very unhappy, the thought of injecting heroin would not occur to us as a way to feel better.

E.g. I have never been drunk and the last time I had any alcoholic drink was decades ago. In situations where most British people would accept or want an alcoholic drink I do not, despite frequently being pressurized by others to have one. After a stressful experience or in a social situation I never even think of having an alcoholic drink.

3. A management method

3.1 Stages of vice management

Various techniques for managing our vices can be applied systematically within a multi-stage approach. This approach is

built around the idea of personal policies and plans for our own behaviour.

These need to be researched and developed, adhered to despite challenges, and adjusted over time.

3.2 Research & develop personal policies and plans

The foundation of successful vice management is an effort to develop:

- An excellent understanding of the consequences of a vice.
- A set of healthier, more productive alternative actions.
- An excellent understanding of their consequences.
- Encapsulations of this knowledge in the form of personal policies and personal plans, often incorporating simple classifications or ratings.
- An excellent understanding of potentially misleading feelings and thoughts, including why they arise and why they are often wrong.

E.g. After careful calculations of the financial cost of buying a large coffee each morning on her journey to work, Julie decides that taking a small flask from home is worth the effort. That becomes her policy, backed by a carefully worked out plan for making the coffee and dealing with the flask. This policy and routine encapsulate the results of her careful evaluation.

E.g. James evaluates the facts about how caffeine affects sleep and decides to cut it out of his diet. This is encapsulated by classifying drinks that contain caffeine as 'unhealthy' and forming a personal policy of only drinking decaffeinated alternatives.

3.2.1 Solid rationale

An excellent understanding of the consequences of the vice and its better

alternatives provides a solid motivation for vice elimination. We need to understand how it really affects us, people we love, and wider society. It helps keep us going through the thinking needed to develop and refine policies and plans. It also makes helpful thoughts we have in a tempting situation meaningful to us and far more powerful.

The quality of the knowledge is crucial. If our reasons are flimsy and our plans unrealistic then they will be challenged by experience often and easily overwhelmed. Uncertainty about whether our approach is correct undermines our resolve.

It is also important to have a detailed understanding of misleading feelings that might be supporting a vice and intensifying temptation.

Finally, it is important to understand when our resolve is most likely to be tested and to plan to deal with that temptation. While this can be done in general terms for situations that regularly arise, there is more to be done in a later stage, closer to the moment of temptation.

3.2.2 Attractive alternative actions

Being able to think of healthier, more productive ways to meet our needs is likely to be beneficial.

E.g. Suppose Andy drinks alcohol in an attempt to deal with his social anxiety. It doesn't work very well. Usually he just drinks in silence until he is slightly drunk and then, if he does speak, he is embarrassing but unaware. While working out how to stop drinking he spends time reading about social anxiety and how to behave in social situations. He devises simple conversation tactics and some guidelines for himself on who to talk to and what to say and ask. It is better than booze.

E.g. In support of the rather obvious point that good alternatives help, Galla and Duckworth (2015) reported six studies using correlation across many people to show that strong self-control and productive behaviour were linked statistically but mediated by good habits. In other words, if you can stop yourself lapsing but don't then do something healthy or productive instead, that self-control does not help you.

3.2.3 *Practical personal policies and plans*

It is not practical to consider every decision in our lives thoroughly every time. The next best thing is to take time to consider decisions we often face, research and think about them (perhaps taking advice), and then encapsulate our conclusions for convenient application in future as policies and plans.

In this publication, the term 'policies and plans' refers to a wide range of mental objects with similar properties. The English language has several relevant terms and their meanings are often a little vague and overlapping:

- 'policies' also includes resolutions, rules, standards, guidelines, and principles. These might incorporate ratings, scores, measurements, or categories.
- 'plans' also includes schedules, timetables, intentions, processes, procedures, methods, techniques, routines, and even some skills. They may be structured with the help of aims, goals, objectives, or targets.

Familiar examples include most diets, limits on alcohol consumption expressed in 'units', and a decision to avoid gambling completely.

From these elements we can create a system of knowledge that is flexible and applicable to a range of similar decisions.

(It is likely that, as children mature into adults, their system of knowledge governing behaviour becomes more refined and elaborate.)

Ideally, the deep thinking that goes into these is performed when we are feeling calm, have calculation devices to hand, and are free from biasing factors such as social pressure, hunger, or other cravings.

The quality of our policies and plans is crucial. Many people will have experienced trying to hold to some new resolution only to give up quite quickly. This is not a fundamental problem with using personal policies and plans; it is just the result of poor design or calibration.

Here are some design ideas likely to be useful.

Simplicity

Other things being equal, simple policies and plans are easier to apply and adhere to.

E.g. When I was a boy, I chewed my fingernails quite badly. One day I decided to stop completely and that was the end of the bad habit. The simplicity of complete abstinence helped make this easy.

In contrast, policies and plans are likely to fail if they are complex, require detailed monitoring and adjustment, have many grey areas, and must be implemented when thinking is difficult.

Attractive alternative actions

Ideally, policies and plans should drive courses of action that are better than the vice. Occasionally that just means not doing the vice. More often it involves doing things that achieve what we thought the vice helped us achieve (e.g.

managing stress, making friends) but in better, healthier ways.

These alternative actions should be worked out in at least adequate detail, be better than the vice, and be supported by a convincing rationale that demonstrates that superiority.

This should not be achieved through a biased evaluation. Instead, it should be objective evaluation that shows the course of action is superior. If the best alternative is not clearly superior then more work is needed to develop a better alternative.

Often, better alternatives also include learning to refuse requests from friends or make different choices from the options they offer.

Reduction of uncertainty

Difficult decisions under temptation are typically decisions where our encapsulated conclusions are hard to apply or where we begin to doubt their wisdom for some other reason.

Policies and plans should ideally guide us well in those difficult situations.

A good fit

Our policies and plans need to be a good fit to our circumstances and abilities; neither too hard to comply with nor so lax that vice goes unrestrained.

Controlled flexibility

Spikes in decision difficulty are common and should be allowed for. It is better to be flexible than to experience failure and give up completely.

E.g. A person training to run their first marathon might decide to run 20 km each week, with 5 km on each of four days. But this is inflexible and likely to cause problems if there are small injuries, viral infections, competing work pressures or life events, or just very unpleasant weather conditions. Even the weather is important because

each run brings some fitness benefit but at a cost of unpleasantness, especially if the weather is far too hot or rain is lashing down. Some days it truly is not worth it.

A more flexible approach might include leeway over which days to run, how far to run, and some forward planning to choose the best days for each coming week. Some kind of monitoring might keep track of overall effort and fitness progress, and make adjustments.

The flexibility should be controlled so that we do not allow unrestrained vice. The flexibility should be restricted, often using temporary variations with limited frequency and duration.

Practical transition

Since it often takes a little time to develop alternative behaviours, revise arrangements with others, and get over withdrawal symptoms (a problem with some vices), it is often wise to transition gradually.

E.g. An ambitious young man adopts plans and policies that call for almost continuous effort all day, every day. There is far too little time for rest, recovery, and spending time with loved ones. At the end of the first day of this regime the go-getter is exhausted and feeling like spending the night gaming. This is specifically forbidden in his plan. However, the fact that his plan clearly failed to include enough rest and fun undermines his commitment to the plan. Maybe gaming until 2 am really would be a good idea? He's worked so hard, surely he deserves it? He gives in.

To be sustainable his plan needed to be much more realistic and adopted gradually, taking time to refine

routines and learn to manage variations in his energy.

Transitions can be made by gradually increasing the range of situations to which a rule applies.

E.g. As he gets older, Doug finds that alcohol increasingly leaves him feeling unwell the next day. He decides to cut down and maybe stop drinking alcohol altogether. The problem is that most of his drinking is with friends. To make it easier he identifies soft drinks and alcohol-free drinks he can have instead. To ease the transition he identifies the four different situations in which he has been drinking alcohol and puts them in ascending order of pressure to drink. Some of his friends are not that bothered about alcohol but others are dedicated drinkers and alcohol is a major part of their social events.

Doug starts by adopted the policy of not drinking alcohol when on his own and then moves on to quitting in the easiest social situation. Over the next several weeks he gradually adds to the categories of social event where he does not drink alcohol, eventually quitting completely. During this transition, Doug gradually gets better at refusing alcohol gracefully.

Alternatively, the transition may be based on gradually changing the quantity and/or frequency involved or may be linked to the severity of symptoms.

Transition plans are more complex but it may be worth it.

3.3 Follow personal policies and plans

Personal policies and plans can be a powerful, easy to implement guide to our behaviour from day-to-day and moment-to-moment. However, challenges are likely

from flawed policies and plans, unexpected circumstances, and biases.

Further steps can be taken to stick to the policies and plans, as far as is reasonable. These steps take place before the moment of temptation and once temptation hits.

3.3.1 *Anticipate and protect*

The idea of this stage is to anticipate upcoming situations likely to involve temptation (e.g. a party, night out, tough task, or developing illness) and prepare to deal with them. This might be by avoiding or modifying the situation, or by preparing to have helpful thoughts when temptation is imminent.

E.g. Pete has been studying for important exams for a week and has three more weeks to go. In the first week he noticed he snacked so much that he put on over a kilogramme of weight. This worries him because he does not want to lose his athletic figure. He has worked out the effect of three more weeks of heavy snacking and knows it will be visible to others.

As he prepares to study, he anticipates being tempted to snack and this time takes precautions. He arranges a pack of oatcakes near his desk instead of the usual chocolate and crisps. He plans to eat no more than 3 oatcakes today. He resolves to remember why he is taking care if he feels tempted to snack, even with the oatcakes.

Consolidate and revise memories

Our memories of policies, plans, and the rationale that supports them tend to weaken and become less accessible over time if not strengthened and refreshed. Before a challenging situation is an ideal time to revive those memories.

Recalling them is more effective than just rereading them but rereading is better than nothing. Applying policies and plans strongly consolidates them, which is good,

but does not necessarily revive their rationale. So it is worth going back over your reasons for policies and plans from time to time.

Form specific intentions

We must remember to have the right helpful thoughts when temptation strikes. This is more likely if we form specific intentions to have the thoughts in particular situations of temptation. Think 'If I am tempted by X, then I will think Y and Z.' Plan to be reminded of this intention from time to time.

This method is called forming 'implementation intentions' and has been tested scientifically many times. It is not a panacea but it usually helps significantly and it takes almost no time to do (see authoritative reviews and theorizing by Gollwitzer, 1999, and by Gollwitzer and Sheeran, 2006).

Implementation intentions can be used to prepare to brush off temptations quickly when they first arise. For example, we might think 'If I become aware of distractions then I will ignore them.' This use has been tested and implementation intentions were helpful.

We can also form implementation intentions to prepare to have longer thoughts when temptation persists. Here there is less direct evidence that implementation intentions are helpful. There is no reason to think they are not helpful, but the studies so far have not directly checked. Studies of implementation intentions for resisting temptation almost always focus on the fact that implementation intentions were used and say little about what the subjects chose to do or think in a tempting situation. Typically, people are asked to make up their own responses to given tempting situations or situations they think of.

In summary, we should form implementation intentions that are simple and express our firm, pre-made decisions on how we want to act initially in particular situations. We should back this up with implementation intentions about what we want to think if the temptation persists. The power of those thoughts is crucial and detailed suggestions are given later in this publication.

When temptation arises this is an opportunity to have those planned thoughts. Every time that is done successfully the ability to have the right thoughts without delay is improved.

(Houben et al, 2011, used an artificial way to practice inhibitory thoughts to reduce alcohol consumption with surprising success.)

Avoid or modify situations

An important way to manage temptation is to avoid tempting situations or modify situations so that temptation is less. This may involve putting temptation cues out of sight, making tempting actions less convenient, and making wiser actions easier.

E.g. A student who wants to study without distraction might choose to go to a quiet place in a library rather than their favourite bar, with sport on the TV, and friends nearby, talking.

E.g. A person who is trying to lose excess weight might put oatcakes in view with chocolate biscuits further back, out of sight.

E.g. To spend less time on a computer game, a person might delete it from their phone.

3.3.2 Protect in the moment – 1st response

A general pattern for thoughts that respond to temptation has two stages: (1)

a rapid initial response with (2) more detailed consideration as a fallback.

In the first stage we try to brush the temptation aside quickly. Just remember our policy or plan and push the temptation away. If we have started to think about the temptation in a way that strengthens it then we interrupt those thoughts. We might have decided in advance that if we feel that temptation then we will look away, ignore it, and do some other thing instead. Often we can just go back to whatever task we were doing and the temptation goes because our minds are occupied with the task.

3.3.3 *Protect in the moment – 2nd response*

However, sometimes the temptation does not go after the first response. Perhaps we are too tired or stuck to think about the task we are trying to do. Perhaps the feelings are strong.

If the temptation persists despite the initial attempt to brush it aside then we can enter the second stage. Now we focus on the temptation for longer, as follows:

- Take a couple of long, steady breaths and gain some mental control with slow self-talk.
- Recall any relevant policies or plans.
- Check physical feelings and notice the situation.
- Consider the possible reasons for feeling the temptation and consider if they are valid or can be responded to in a healthier, better way.
- Direct attention away from any cues related to the temptation.
- Form a better plan, even if it is to do nothing or just follow your usual policy and plan.
- For extra resolve, mentally run through the major drawbacks of giving in to the

temptation (e.g. financial, health), especially if we give in often, and how good it will be if we don't give in.

Section 4 discusses in detail possible reasons for particular temptations, better actions, and the drawbacks of giving in. These may be personal to you but the lists in this publication are a starting point.

Here are some more details on the thoughts to use in the second response to temptation.

Reduce unhelpful thoughts

Unhelpful thoughts to be avoided include:

- Focusing on the sensations that the tempting action will bring.
- Planning to perform the tempting action.
- Devising excuses for giving in to temptation.

Obviously, these thoughts send us in the wrong direction.

E.g. If I have a chocolate biscuit and then feel tempted to finish the pack it is common sense that I should not: (1) Gaze at the remaining biscuits, imagining the delicious flavour I would experience from eating them. (2) Plan how I will eat them and what to do with the empty pack. (3) Think of excuses to tell myself and others.

Examining one element of this, Andrade, May, and Kavanagh (2012) reviewed evidence on ways that reducing tempting imagery reduces temptation. Their idea is that our imaginations increase the pull of temptation.

What should happen is that our intelligence should be used to reduce and overcome temptation, not pump it up.

Direct attention

Even if it is impossible to remove tempting cues it may still be possible to pay less attention to them. Look away at

something else. You might not have to look very far away.

E.g. Some promising results have been achieved with Attention Control Training. This typically involves subjects doing a simple task on a computer. Pictures of tempting things (e.g. favourite foods) are shown and subjects are required to identify the colour of the background or outline of the image. The difficulty is increased in stages and subjects are encouraged to be fast and accurate. The task involves fixating on and paying attention to points very near the tempting image while ignoring the image itself.

In a study by Bazzaz, Fadardi, and Parkinson (2017) this training (15 – 20 minutes once a week for four weeks) reduced BMI and diet quitting compared to a control group and a sham procedure that served as another type of control group.

Question and correct your motives

The idea of challenging motivations to deal with possible biases is relatively new and has not been tested scientifically as far as I know. However, a sceptical attitude seems to help. Jenkins and Tapper (2014) found that people who were asked to view their tempted thoughts as just thoughts, not necessarily the truth, were better able to resist chocolate.

The approach of challenging potentially misleading feelings and thoughts with knowledge and logic takes this much further. Instead of just standing back and looking at those potentially misleading thoughts, we seek the truth, knowing that our feelings and thoughts may be unreliable. This directly tackles the problem of bias discussed earlier.

Remember costs and benefits

Another obvious tactic is to think of the good reasons why resisting the temptation is truly beneficial.

This will be more powerful if we know more about those reasons. Developing better understanding of the consequences of our actions is important and may involve considerable study time. Consequences may affect us, our loved ones, and wider society.

Sadly, just knowing about the drawbacks of a behaviour is not enough. We must think about them and apply them to the decision.

E.g. Several studies have shown that successful dieters often respond to attractive food by remembering their goal of dieting (and the anticipated advantages) and this helps them avoid unhealthy eating. In contrast, unsuccessful dieters usually do not link the food to their goal of dieting. (Their vice is unrestrained, usually because they hardly think about it.) This is not fixed. People can learn to remember why they are careful of what they eat.

Kroese et al (2011) reported two studies where dieters were asked to form intentions by thinking 'If I see or smell [a food temptation], then I will follow my goal to diet.' In effect, linking the attractive but unhealthy food with the plan to diet. In both studies snacking was reduced in the subsequent week. Further analysis showed that this was linked to stronger associations between the food and the idea of dieting (i.e. avoiding eating it), and that this was most useful for people who had previously failed to diet.

In a tempting situation there may be negative feelings (e.g. hunger) and a tempting solution (e.g. tasty, aromatic, hot food). The mind is at first occupied

with those and may move on to predicting and imagining the immediate consequences of giving in to temptation (e.g. the flavours, feelings of hunger going away, feelings of relaxation). This is the natural result of the initial feelings and sensations, which are highly salient (i.e. in mind) at first.

What is needed is a more comprehensive assessment of consequences. The predictions and imagination should move on to:

- The subsequent effects of the tempting action (e.g. loss of money, sluggishness).
- The effects of repeatedly doing the tempting action (e.g. gaining weight, years of poverty, fatigue, and health problems).
- The immediate effects of some wiser course of action (e.g. will probably stop feeling hunger soon anyway).
- The effects of repeatedly choosing the wiser decision (e.g. years of good health and mobility, longer life).

By thinking of these things – even imagining them in some detail – they become more salient and a balanced assessment of the actions is more likely.

Remember the better alternative actions

Devising better alternative actions is part of developing personal policies and plans. In a tempting situation it can help to remember what those alternative actions are. Run through them mentally and they will be easier to do.

3.4 Revise personal policies and plans

Even if personal policies and plans are developed carefully through meticulous research they must often be changed. The reasons for this are:

- Remediation: to fix them so that they are workable and effective.
- Refinement: to improve them further.
- Adaptation: to adjust to changing circumstances.

Policies of complete abstinence require less revision but even here it may be worthwhile changing the behaviours that replaced the vice. More complex policies and plans need more adjustment.

E.g. A person with a carefully worked out diet will need to make changes if it does not have the intended effect on weight and health or if they start a vigorous exercise regime, change jobs, become ill, or suffer a drop in income.

Some changes can be planned. A new policy might be implemented at first in a simpler, less demanding form and then progressively tightened or otherwise refined.

It may be helpful to have documented the policies and plans and to keep records of behaviour and results (e.g. weight and waist size).

E.g. I weigh myself almost every day in a standard way and put the measurements into a spreadsheet that shows a graph of my weight going back years. Any trends in my weight are quickly obvious.

4. Managing common vices

This section looks in more detail at some common vices.

4.1 Unhealthy eating

Some feelings, especially hunger, urge us to eat, perhaps to overeat, or to eat too much of something that is not healthy for us. Or we may be trying to get rid of excess fat by restricting our eating and

feelings tempt us to give up, at least for a moment.

There is evidence that the intensity with which we feel hunger is partly determined by our genes. Obviously, it is also determined by the deliciousness of the food in front of us. In developed countries today there is no shortage of extremely palatable food at low monetary cost.

4.1.1 Decision characteristics

Decisions about eating typically take place when we think about eating, when we are presented with food, when we prepare food, and when we shop for food. Problems arise from eating too much, eating too much of some foods, and eating foods that are unhealthy in any quantity.

Temptation spikes when we are hungry, thirsty, tired, upset, bored, perceive hyper-palatable foods, and in social situations where indulgent eating is expected.

Decisions about food can be complex because of the many different nutrients needed and the difficulty of keeping track of what has already been consumed. There are also scientific uncertainties about what is healthy and further uncertainties because of individual differences in what our bodies need.

Policies and plans are usually relatively complex.

Biasing factors include precautionary eating, fear of nutritional deficiencies, fatigue, a desire for comfort, peer pressure, convenience, curiosity, and marketing.

4.1.2 Personal policies and plans

Although we can and should create policies and routines for ourselves these are usually complex and require frequent monitoring and adjustment. There are some foods that can and should be

eliminated completely, which simplifies rules. For other foods the problem is to decide how much can be consumed.

E.g. One strategy that tries to provide simplicity with flexibility is to have a standardized meal plan for main meals (carefully worked out for nutritional balance, completeness, and overall calories) plus a daily allowance for snacks that can be adjusted at the start of each day. The snacks might be in a box or other container, loaded in the morning. Adjustments to the snack allowance might be made based on recent over- and under-eating, body weight trends, desired body weight trends, experienced hunger intensity, and planned activity levels.

Other policy ideas include:

- Health ratings of foods you like to guide your decisions (e.g. grammes of protein per 100 kilocalories).
- Special rules for special meals such as Christmas dinner, for travelling, and for other difficult situations where you cannot eat your usual diet.
- A formula for reduced eating after a day of heavy eating.
- Rules that flex your diet in response to weight changes.

Alternative activities we may need to develop and increase within our personal policies and plans include improved hydration, rest, relaxation, and pleasurable, comforting activities.

4.1.3 Drawbacks of overeating

Food and food preparation are usually costly activities; eating more than we need is a waste of time, money, and other resources. Eat more and we need to spend more time on food shopping, eating, and cleaning up afterwards.

One of the first problems with weight gain is that some of our clothes will feel

uncomfortably tight. Beyond that there is the expense of having to buy new clothes in a larger size, and more if the weight gain continues. We might end up storing clothes in several different sizes to deal with a fluctuating weight, which may require extra clothing storage space or limit our choice of outfits.

Being overweight is tiring and reduces our abilities. It is like being the weight we once were but now wearing a heavy backpack, ankle weights, and wrist weights we cannot take off.

Our attractiveness is reduced because we look less healthy, older, and less capable than we would look if slim (but not thin). Being overweight may lead some to suspect weaknesses in our self-control.

Our health may be worsened. The weight creates extra strain on the skeleton, increases the risk of cancer and heart problems, and may cause sleep problems. Becoming overweight increases the risk of type 2 diabetes, which itself can lead to many nasty complications.

A huge drawback of becoming overweight is that it makes us more susceptible to regaining excess weight if we should manage to reduce it by dieting and increased activity.

Beyond the personal drawbacks, being overweight somewhat reduces our ability to do things for our families and can lead to them having to do more for us. The difference may be hard to see but consider how much more a person could do without the continuous burden of carrying that extra weight. Our personal health problems also affect our loved ones.

4.1.4 *Biasing factors*

Precautionary eating

We can feel hunger even when we are nowhere near starving, when our

stomachs are not empty, when our bodies are still busy digesting food from previous meals, and when we are already overweight. How can evolution have resulted in such misleading feelings?

Probably evolution is the problem. Our bodies evolved in times when food was less plentiful and less consistently available than it now is in developed countries. In seasonal lands, if we did not put on enough fat in the good seasons then we would starve to death in the bad ones.

On a shorter time scale, if we did not eat when we could then we might have struggled through days of deprivation during which we might have lost weight or struggled with cold.

And on an even shorter time scale, if we did not eat when we could then we might have seen the food eaten by another human or other creature.

It is very likely that some of our feelings of wanting to eat are driven by an evolved tendency to eat now as a precaution against not being able to eat later.

These instinctive feelings are stronger when the food available is high in calories and would be perfect for building up body fat stores. Foods that combine sugar and fat are most tempting of all and are sometimes described as 'hyper-palatable'.

The instinctive drive to eat even when we don't need to conflicts with our modern desire to remain or achieve a healthy and stable weight, slim but not thin. We can remind ourselves how out-dated those instincts are and how confident we are of being able to eat later, whenever we want. If we are trying to lose weight then we can remind ourselves that the hunger we feel was anticipated and considered; it is all part of the plan and quite safe.

Fear of electrolyte deficiencies

If we are very active in a hot environment then we lose salt through sweating. Being short of salt can make us feel tired. If we feel tired then sometimes we might fear an electrolyte deficiency we don't have.

Rather than eat more in general, replace the salts specifically with a suitable drink or food, especially if on a diet that is generally low in salt for health reasons.

Sports drinks contain sugars and salt but often all we need is the salts.

A slightly different pattern of electrolyte loss happens when we are ill. Again, targeted replenishment is a good idea.

Fear of other specific deficiencies

It is possible that, sometimes, a person whose overall consumption of food is more than adequate nevertheless is not eating enough of something specific, like a vitamin, mineral, type of protein, or type of fat. It is possible that they may be particularly vulnerable to a specific deficiency despite eating a varied diet.

To allay fears of such a deficiency, adopt a varied diet, take daily supplements for common vitamins¹ and minerals, and perhaps have medical testing if there is a specific concern.

The idea should be to consume just the foods that fill the deficiency instead of eating more food generally in the hope of addressing the deficiency.

Fatigue

Dehydration can leave us feeling tired, making us think we need food when in fact we need water.

In addition, we can sometimes be fooled by the delay between eating and gaining energy. If we are tired and then eat, the

initial consequence is often that we feel more tired, perhaps a little sleepy, and only after two hours (less for refined sugars) do we get some energy from the food our bodies have been working to digest.

While waiting we may continue to feel that perhaps some food will help us become energetic.

In fact, hydration and rest are much more likely to have that effect quickly.

Desire for comfort

Chocolate gives most of us a warm, comfortable, relaxed feeling. Most sweet things do. This is felt very quickly and goes beyond reduced hunger.

If we want to limit our intake of refined carbohydrates for health reasons then we can use other methods to get that warm, relaxed, comfortable feeling.

It is usually possible to get some pleasant feelings immediately by:

- Changing our clothing if temperature is a problem.
- Getting into a more comfortable, restful position, and focusing on the good feelings that result.
- Focusing on parts of the body that feel fine.
- Relaxing muscles and focusing on the sensation of relaxation.
- Breathing slowly and steadily, again focusing on that breathing.
- Letting go of feelings of time pressure.

Peer pressure

Some social events are traditionally associated with overeating. At other times, people who want to overeat will try to encourage others to join them. Just

¹ Most people do not need to supplement most vitamins, but there is a risk of narrow deficiencies. An exception is vitamin D, which often needs

supplementation in autumn and winter for people living in less sunny climates (e.g. the UK), especially if they have dark skin (NHS, n.d.).

being surrounded by people eating creates an instinctive desire to join in.

Usually, the best response is to keep our portions small. None of these circumstances requires overeating.

Convenience

There is nothing inherently wrong with convenient food but food that is easy to prepare and eat encourages more eating. Also, many convenience foods (e.g. ready meals, takeaways) are high in calories, sugar, salt, and unhealthy fats. The appeal of convenience is greater when we are tired and short of time.

We should notice when convenience might be biasing us and take care to inspect the ingredients carefully or avoid the food.

Curiosity

One of the dangers with a buffet is that we sometimes want to try many of the foods on offer. This may be instinctive, having evolved because discovering new foods was adaptive. It is also fun to discover foods we like or find something at the table that is particularly enjoyable.

These are genuine considerations in some cases so we must take care to limit the amount we try of each food. Just try the smallest amount possible – a small mouthful or taste – to leave room for more of something special.

Marketing

Some food marketing campaigns have been so successful they have created national traditions. Our views on what is healthy have been shaped by lobbying and marketing, including the infamous campaign by the sugar industry to make fat the bad food and escape restrictions on sugar (documented at length by Oreskes and Conway, 2011).

Some food marketing techniques encourage us to eat more than we should. Getting extra free and bulk discounts

encourage us to buy more now and having a larger stock at home encourages us to eat the food more quickly.

Marketing can also trick us into thinking that foods are healthier than they really are. This includes granolas and smoothies full of sugar, organic foods with unhealthy contents, and unhealthy foods with at least one healthy ingredient.

Pubs and restaurants can bundle alcohol with food to reduce resistance and sell more products.

We must take time to examine nutritional information carefully whatever the reassuring marketing says.

4.1.5 Thoughts when tempted

When you are feeling tempted to eat more than you suspect you should (e.g. breaking a policy), and if that temptation persists despite initial attempts to push it out of mind, then take some steadying breaths and:

- If true, reassure yourself that the food already in your body and being digested means you are not going to starve soon.
- If true, reassure yourself that your supply of food is secure and you will certainly have opportunities to eat long before you suffer any dangerous effects from lack of eating.
- If true, reassure yourself that your current body fat means you are not in any danger, even if you eat nothing for days.
- If true, reassure yourself that you have taken care to avoid specific dietary deficiencies.
- Examine the feelings you have. Is there fatigue? If so, have you lost salts or other electrolytes recently? You may need a special top up. Are you thirsty? Hydrate (e.g. with water or tea).

- If you are fatigued then rest.
- If you are tense then relax, breathe steadily, and enjoy feeling comfortable. Give yourself an instant 'mouthful of chocolate' feeling.
- Check for bias from peer pressure, convenience, curiosity, and marketing.
- Remind yourself of the downsides of overeating, especially if it persists. If you are currently trying to lose some weight then remind yourself why.

Then take whatever action you have decided, such as resting or hydrating.

4.2 Excessive digital play

There are many things you can do on a computer, phone, or TV that are interesting and entertaining. These include playing games, watching short videos, watching longer videos, social media comments, and searching the Internet for interesting stuff.

There's nothing wrong with being entertained, contributing to an online discussion, keeping up with friends online, or finding out interesting things. The problem comes when this gets in the way of more doing important things by wasting our time, distracting us, tiring us, or ruining our sleep.

4.2.1 Decision characteristics

Decisions about digital play are frequent now that we spend so much time at a computer or holding a smartphone. There are also many digital TV channels including on demand box sets to binge. Even without the device in front of us we may think about digital play if circumstances prompt us.

We are particularly likely to do this if we are bored, tired, stuck, or when our friends ask us to join in. Sometimes we start digital play when it is justified but then fail to stop when we should. It is

important to avoid excessive digital play when we need to get work done, rest, or sleep.

Although some types of digital play can be avoided completely, most only need to be controlled to a reasonable level, making it harder to set personal policies to limit this vice. Some videos really are educational. Some TV shows are relaxing after a hard day's work. Some computer games truly do improve skills useful in the real world. Sometimes gaming is a way to consolidate friendships.

Biasing factors include feeling stuck or tired, the desire to feel pleasure, peer pressure, and software design.

4.2.2 Personal policies and plans

Personal policies and plans for digital play might include:

- Digital play activities that must be avoided.
- Times in the day, in the week, locations, or activities within which there is no digital play (e.g. never after 11 pm, not in the four weeks before an exam).
- A basic, standard timetable of digital play for a week stating the allowed times and types of play.
- A variable allowance for extra play that is set at the start of each day or week, bearing in mind various factors (e.g. holiday, exams, deadlines, special social occasions).
- Types of game you will not have on your devices.
- A ban on in-app purchases.

Alternative activities that may need to be incorporated include improved rest and relaxation methods and other forms of social interaction.

4.2.3 Drawbacks of excessive digital play

Digital play can absorb a massive amount of time. Games, content sites, and box sets are designed to keep us interested and playing. We may start to shift our attention from real world goals to goals within a game, leading us to think about it even when not playing the game.

Playing deep into the night can disrupt sleep and leave us feeling tired, sleepy, and gloomy the next day. We are kept awake by the light from the screen, the continual movement, and the need for actions.

Playing (games and social media especially) can be tiring and tense, leading to eye strain, headaches, and repetitive strain injuries. Particularly difficult team games may cause stress hormones to be released leaving us sweaty and smelly.

Playing on the computer is not usually expensive in money terms but it can be if we make in-app purchases.

In total, the combination of losing hundreds of hours to digital play over many months, blighting much of our other waking time with sleep debt, and forgetting real life can cause considerable loss of progress in life with major consequences for decades.

Resist that temptation and we have the chance to rest properly, feel fresh most of the time, and easily find time to do important tasks.

4.2.4 Biasing factors

The obvious driver of digital play is 'boredom' and there probably are people who literally have nothing to do or whose tasks are entirely tedious. However, this is rare, especially for young people still in education. Their real issue is not lack of mentally stimulating things to do.

Feeling stuck

When we work on a difficult task, or try to, we often feel stuck. We are not sure what to do and begin to feel tired. We feel that we are failing or at least not making progress.

Computer play offers us many ways to get a feeling of progress and success. For example, we can play a game and win points, battles, and items. Even a simple game like Minesweeper can provide strong feelings of progress and occasional success. Our minds flow through the game, smoothly executing long-practised skills, and occasionally we complete the game successfully, maybe even achieving a personal best time.

Watching short videos sometimes gives us the sense that we are learning, or might soon learn, information that helps us in our lives. This again gives feelings of progress.

Better alternatives are to:

- Take a short rest.
- Do something else that is useful but not mentally demanding for a short while.
- Do easier sub-tasks that will make the harder parts of the difficult task easier, perhaps by developing our knowledge or skills.
- Make a thinking plan so that we can tackle our problem in a more systematic way, starting with easy sub-tasks that prepare the way for the harder ones.

Feeling tired

Even when we are not stuck, we may still feel tired if a task is difficult or lengthy. Digital play offers a break and a rest from this.

However it is not as effective as taking a rest where we do nothing and think nothing.

Desire to feel some pleasure

If a task is not inherently pleasurable, which is common, the temptation of digital play is strengthened by the possibility of seeing something that gives pleasure. Much content online and on TV features attractive people, locations, activities, or gadgets. There is often music.

Unfortunately, watching this content is not as restful as truly resting by doing and thinking nothing. It also will not be as pleasurable as doing the same thing at a better time, guilt free.

If we plan some pleasant activities, including resting, within our otherwise productive schedule then we can reassure ourselves that pleasure will happen. There is no need to grab some now in case there will be none later.

Peer pressure

Many people enjoy computer gaming and social media with others. They may be friends 'in real life' or only online. Or they may just be people who are online at the same time.

Gaming and social media with friends can be harder to avoid and it can be hard to break away and do other things once we have started.

Having friends is important. Friends are good. However, if fear of losing friends is making it hard to get on with important things like academic studies and taking exercise then that's a problem.

The fear of losing friends may be instinctive but exaggerated. Would we really be rejected if we stopped playing to eat some food or do homework? Will they forget us if we only play occasionally?

More likely, the people who continue playing are the ones most anxious not to lose friends. They will be pleased to welcome us back whenever they can.

If we reassure them that our choice not to play is driven by important things 'in real life' then they should not feel we are rejecting them. If they are still awkward about it and continue to demand that we play then perhaps the problem is that they are struggling with temptation. They want others with them so they feel better about themselves. They are using us as an excuse, not treating us as valued friends.

Software design

Most games and sites that provide video and audio content are designed to keep us playing.

While playing games our attention is grabbed continually by moving images, colours, sounds, and events we must respond to. Small efforts by us often produce spectacular results on screen such as rapid movements, powerful actions, loud sounds, and explosions.

Games provide frequent challenges and rewards including celebratory sounds and images, points, kills, 'gold' and 'jewels', items (such as equipment and clothing), level changes, and unlocking new characters and parts of the game. Occasional setbacks often just provide further motivation to try harder next time.

Even a static web page offers many enticing web-links, each offering the chance of discovering something interesting.

Sometimes games continue for hours without a natural break.

When a game, or a round of a game, finishes, the software usually sets up the next game or round immediately and without much effort from us. When a video, box set episode, or music track finishes the next almost always starts automatically or at least is offered just a click away.

We must be aware of the effects of these features and deliberately fight against

them. (Switch them off if possible.) Be ready to abandon the game without finishing. Ignore the fact that the next round or episode is getting ready to play. Remember that the game rewards are just imaginary.

4.2.5 *Thoughts when tempted*

If temptation persists despite an initial attempt to brush it off and refocus then take a couple of steadying breaths and:

- Consider if you are stuck or tired. If you are then decide to rest for a specific amount of time by doing nothing at all.
- If you are feeling like you haven't had fun for too long then plan to have some later when it is appropriate. Reassure yourself that pleasure will come so you do not need it now.
- If others are tempting you to join them in play but you have important things to do instead, or need a proper rest, reassure yourself that your friends will not abandon you if you do not play now.
- Remember the problems that wasting hours on play will cause you: lack of progress on important things, fatigue, stress, and sleepiness.
- If you are already playing then remember that the rewards are imaginary and notice that you feel at least a little tired and ready for a break, which you can take any time.

Then explain to friends your reasons for not playing now and reassure them that you look forward to being with them when you can. Get up from your work and take a proper rest for a specific time, with no tiring digital play, not even video clips or auction sites.

4.3 Retail therapy

Most of us go shopping several times a week, often for food. We need to shop. There is nothing wrong with shopping.

Retail therapy, however, is buying things we don't need just for the feelings that shopping gives us.

4.3.1 *Decision characteristics*

Shopping decisions are an everyday occurrence and there is only a fine line between necessary shopping and retail therapy. It is particularly difficult to set rules to govern our shopping behaviour.

Biasing factors include wanting to solve problems and feel powerful, peer pressure, and advertising tricks.

4.3.2 *Personal policies and plans*

Personal policies and plans might include:

- Types of purchase to avoid completely.
- Times each week for shopping and times with no shopping, or durations for the day or week.
- A required process for considering every purchase carefully, blocking impulsive purchases. Alternatively, a required process for certain types of purchase.
- A small budget for non-essential purchases that is adjusted each week, responding to various relevant factors.
- People you will not shop with.
- Categories of possession where your total number is limited (e.g. 'No more than five jumpers.') so you have to get rid of something first if you have reached a limit.

Alternative activities to be boosted include other forms of self-reassurance and social contact.

4.3.3 *Drawbacks of retail therapy*

The shopping itself takes time and energy, even if it is just done online. There is

travel time, browsing time, time spent recovering afterwards, and time spent processing the new purchases (e.g. setting up electronic gadgets and disposing of packaging). There may also be more time later returning disappointing goods and getting refunds.

The shopping costs money, of course. Money that we or someone else may have worked hard to obtain. Even if our retail therapy involves buying items that are cheap individually, a pattern of repeated purchases can add up to considerable cost.

There is also the problem of storage. Most British homes are over-stuffed with possessions – much more than a few decades ago. Every wardrobe is full of clothes. There are gadgets we are using and more gadgets we have stopped using that lie in garages, lofts, cupboards, or just on the floor waiting to be dealt with in some way. Crockery gradually accumulates until there is no space left in cupboards or on shelves. Shoes pile up. Furniture. Toys. Mountains of stuff, even for people with no propensity for hoarding.

The problem of having too much stuff hits hard when we need to move to new accommodation. Students and renters in particular are likely to move often and having a lot of unnecessary stuff makes that harder.

Finally, there is the problem of disposal. Do we give something to charity, offer it online, pass it on to someone, bin it, or take it to the community recycling centre?

Those were just the personal problems from retail therapy. On top of that are the societal problems of resource waste, poverty (for those unable to compete with our retail power), and pollution. Sustainability and retail therapy conflict.

4.3.4 *Biasing factors*

Association with solving problems

What makes retail therapy tempting? One possibility is that we think we might solve some of our problems by buying something. It has sometimes worked in the past, so why not try it again? This is one of those lizard brain crude associations.

A carefully thought through purchase that has a good chance of solving one of our problems may be a good idea. However, retail therapy involves acting on vague associations between problems and shopping.

Genuinely relevant purchases may create a conditioned link between buying things and solving problems. This can give us a feeling that buying almost anything will make us feel better.

Slightly more focused associations may link particular problems to shopping for broad classes of item. For example, if we want a job then buy some smart clothes. If we want a lover then buy more clothes, cosmetics, jewellery, scent, and accessories. For friends, buy party food and booze, a new sofa, or get the house extended to create a party space. Bored? Buy another entertainment gadget. Stuck with a problem? Buy a book or magazine for inspiration.

At other times we are tempted to repeat purchases that were successful before. If buying that first motorcycle brought mobility and freedom then buy another, and another.

Clearly, there are problems with these associations and feelings. Buying another of something we already have will not bring the same value that the first one did. Often, we already possess the clothes, food, space, and so on that we need. What we lack is a good plan to use them. Often the solution we seek has

nothing to do with possessions; usually it is our behaviour that needs attention.

Typically, our problems are much more likely to be solved by focused, clear, constructive thinking about the specific problems. Planning to do that, perhaps with help from someone wise, is a better way forward.

Association with feeling powerful

Buying things can also give us a feeling of power even if we do not buy something that feels vaguely like a solution. It reassures us that we have *the ability* to make things happen and get the solutions we need to our problems.

This may be an illusion. It shows that we *had* the ability to make things happen, until we wasted that money. Now perhaps we are out of money and out of credit.

Again, a more specific attempt to think about life challenges is more likely to help.

Peer pressure

Like many other tempting activities, retail therapy is sometimes social. Shopping with a friend may be pleasant and harmless but could also induce more frivolous shopping.

Perhaps better to go for a walk with the friend. The conversation will probably be better too, uninterrupted by shopping.

Advertising tricks

Not all advertising is trying to persuade us to buy stuff we don't need. However, a lot is. There are companies whose entire product range is frivolous.

The advertisers have a range of tricks to part us from our money. Some directly target retail therapy by providing excuses for the frivolous expense.

E.g. 'Because you're worth it' has been used by L'Oreal since 1971. The idea is that, because you're a great person, you can justify buying unnecessarily

expensive personal care products. You deserve them. Actually, if you are a great person then someone else should buy them for you and, really, that other person should buy the best products, not just the most expensive.

A variation on the idea that we deserve to have expensive things (even though we have to buy them ourselves) is the idea that we deserve some me-time. We have been working so hard to do things for others that it is only fair that we spend some time (and money) on ourselves. This ignores the fact that, if we waste money on something expensive we don't need, then we will have to do more work for other people to afford it.

Do we deserve to be pampered? Perhaps we do, but the cost of an hour in the spa could easily be three hours stacking shelves. Might it be fun to be pampered in the spa? Yes, but there are cheaper ways to have fun.

4.3.5 Thoughts when tempted

If temptation persists despite initial attempts to brush it off, consider:

- If the reasons for the purchase or shopping trip are sound, or perhaps just influenced by advertising or social pressure that could be met in some other way.
- Think through the many drawbacks of retail therapy, from the initial time and expense to the clutter and irritation later. Convert the expense into the work you would have to do to earn that money, after tax.

Then do something low-cost (or even no-cost) instead.

4.4 Psychoactive substances

These are substances that affect our minds. They include caffeine, nicotine, alcohol, cannabis, and other illegal drugs. Typically there is no harmless level of use.

4.4.1 Decision characteristics

These decisions come up when the substance comes into view and when feelings get us to think about the substance. The action might be to purchase the substance or consume it. The typical spikes of temptation depend on the substance.

Although complete abstinence is usually a sensible policy, alternative activities can be harder to work out and encapsulate in policies and plans.

Biasing factors include a desire to feel more or less alert, peer pressure, the loss of control caused by some of the substances, and withdrawal symptoms.

4.4.2 Personal policies and plans

Usually it is sensible to completely abstain (though it rarely seems that way to users), so it is simple to devise the main rules to govern the vice.

E.g. I have never been drunk and took my last alcoholic drink at the age of 13. Although many people have pressured me to drink over the years, complete abstinence is a simple policy and I experience no personal craving for alcohol. In contrast, drinkers who try to just cut down have a complex task. Keeping track of units is difficult, especially in a noisy environment when they are already slightly inebriated by alcohol or distracted by some stressful event.

However, it may not be sensible to go for abstinence immediately if this is too daunting or there is physiological addiction (which may be helped by medication under the supervision of a doctor). The research on moderation versus abstinence is divided and complex. Much of it reflects a desire to engage disinterested addicts so

is not directly relevant to people who already want to eliminate their vice and wish to choose the best way.

Alternative activities to be developed and incorporated in policies and plans depend on the drivers of the vice. They may include better relaxation, sleep, or control of anxiety. For a detailed examination of stress management methods see Leitch (2020).

4.4.3 Drawbacks of psychoactive substances

Psychoactive substances tend to have medium- and long-term effects that are the opposite of their immediate effect. Take something to calm down and later we will be more prone to anxiety. Take something to feel more alert and later we will feel sleepier. Take something to forget our problems and later we will have more problems to deal with.

Part of this is physiological adaptation to regular use. Our brains come to anticipate and depend on the arrival of chemicals and if those chemicals stop then our brains can take a while to again get used to doing all the work.

The adaptation also tends to reduce the psychoactive effect of the substance, leading people to take higher doses to get the same effect.

There are other mechanisms too. These are explained in the subsections below.

Another major drawback of psychoactive substances is their financial cost². Individual doses add up over time to a large expense. Also, many of the substances are addictive, either driving continuous use or creating a long-lasting vulnerability. The financial cost is one of

² Just two examples: according to prices I checked online in 2022, at a major supermarket chain sparkling wine is more than 20 times as costly as

sparkling water per 100 ml. Price differences in a popular wine bar chain are much less due to the over-priced soft drinks.

the first obvious signs of serious problems.

Damaged health and death are also commonly associated with psychoactive substances. Anything that involves inhaling smoke particles is likely to be damaging to the lungs at least. The effects of tobacco have been studied extensively so its role in causing lung cancer and other deadly diseases is well known. It would be irrational to think that other smoke particles are perfectly safe to inhale. Likewise, tobacco and other substances up the nose are likely to cause damage. Injections carry risks from infection and wounds.

Prolonged, heavy use of psychoactive substances often leads to a general loss of relationships and life satisfaction.

Alcohol kills brain cells and prolonged heavy drinking causes severe, shocking shrinking of the brain. Wikipedia offers a range of highly informative pages on the health effects of alcohol. Pages cover alcohol and health, alcohol abuse, alcoholism, alcohol-related brain damage, short-term effects of alcohol consumption, and binge drinking.

Beyond the personal effects of psychoactive substances there are also impacts for those around us such as our families and friends. They may be exposed to the substance through smoke or vapour. A pregnant woman will expose her unborn baby to them. Alcohol, for example, can cause brain damage in the unborn baby leading to lifelong problems for the child.

E.g. When I was young it was common for people to smoke tobacco in the presence of children. A girl I knew suffered severe asthma attacks sometimes requiring hospital treatment and yet both her parents smoked many cigarettes each day in her presence. In restaurants and bars

there would occasionally be a 'no smoking' area but this was almost always ruined by smoke encroaching from the rest of the venue.

4.4.4 *Biasing factors*

Desire to feel more alert

If we feel tired or sleepy then we may want to become more alert. Perhaps we need to stay vigilant or have our mental powers available for a difficult but important task. Maybe we are just struggling with life generally and feel that alertness would help.

Stimulants such as caffeine and nicotine can help in this situation but there is a big problem with them: they tend to interfere with sleep leaving us sleepier the next day. This can create a cycle of dependency as we take more stimulants to compensate for the effects of taking stimulants in the past.

When we feel sleepy the best response is to get some sleep. Even a short nap can help.

To get sleep patterns onto the right schedule we must make ourselves get up at our intended ideal time each morning. If we are short of sleep then this will be difficult and we will need an alarm and some willpower. It will also leave us feeling sleepier during the day but that will help us get to bed and fall asleep earlier in the evening, which is how this technique works.

It is possible that some stimulants take over from the alerting functions in our brains, which start to work less hard. When we stop taking stimulants those natural alerting systems may take some time to get back to full activity. Consequently, we may need to wait through several days of low alertness before our brains recover.

Desire to feel relaxed or distracted

If we are troubled by anxious rumination (endlessly wrestling with a difficult and upsetting problem) or paralysed by anxiety then we might want to reduce our ability to focus and think. Alcohol does this effectively but with major drawbacks.

We become less productive, less sensitive to other people, and more likely to take ill-judged actions. Getting drunk in response to a relationship problem can easily make the relationship worse. Getting drunk to overcome social anxiety can lead us to do the stupid things that we were worried we might do. On top of that we might also throw up in someone's house or car; the smell is hard to get rid of.

Longer term, alcohol has serious health effects including damaging our brains slowly but surely. Heavy drinking causes our guts to leak into our bloodstream. It also gives the familiar hangover, a symptom of poisoning. Alcohol is carcinogenic in any quantity.

Drunk people are in danger of road accidents and being taken advantage of.

Cannabis is similar to alcohol in many respects.

These are not effects that lead to relaxation and solved problems.

Peer pressure

People who use psychoactive substances often like people around them to join in. At the peak of tobacco smoking in the UK it must have been hard to avoid it. In movies from that time the characters are constantly lighting up and often use the rituals of cigarette lighting as a way to start relationships or show kindness.

The culture around alcohol in the UK is even more elaborate. Boozers do their best to get others to booze with them and there are many traditions that help them do it. Buying a round is perhaps the most powerful. 'You look like you need a drink'

promotes the false idea that alcohol is a good response to a difficult day. 'One for the road' could hardly be less appropriate. Somehow, champagne has become associated with celebration so that even non-drinkers are often given glasses of the alcoholic drink to raise aloft in a toast.

Similar tactics are used by people who consume other psychoactive substances.

This is a very difficult motivation during moments of temptation because some people we think of as friends really would drop us if we didn't join them in their vice. The best thing might be to find new friends, but that doesn't help us in the short term.

In the short term we may have to remember that someone who only likes us because we share their vice is not a real friend at all.

Deception

Behind most vices is an industry – an industry working to sell its products. From up-market vineyards that open to the public to dodgy drug dealers on street corners, the sales effort continues relentlessly. The marketing messages repeat that the substances give you good feelings and are safe.

E.g. Kirisci et al (2004) studied adolescent boys through their teens and found that one of the factors that increased the risk of them trying cannabis was holding positive expectations about its effects. Another predictor was distorted, irrational thinking across a range of issues unrelated to substance use.

The 'foot in the door' effect

Substances that interfere with logical thinking, such as alcohol, are hard to resist once we've had some. 'Just one drink' quickly becomes two, and then several.

Completely avoiding these substances is the best approach but if we fail in this then we must remember that a big part of the temptation is just a drug calling us. We don't really need it. We must fight harder to remain in control.

Withdrawal Symptoms

Some psychoactive substances, if consumed consistently, cause the brain to change its own production and breakdown of chemicals. It comes to rely on the regular, artificial doses from outside. When these stop the brain chemistry can take a while to return to normal, causing withdrawal symptoms.

These symptoms need to be interpreted as what they are: artificial symptoms that will pass. Feelings of anxiety do not mean there is something to worry about (though some withdrawal symptoms can be a serious health risk). They are just feelings driven by chemistry. Feelings of sickness or tiredness do not signal an infection or injury. They will go away if the psychoactive substance is avoided for long enough.

4.4.5 Thoughts when tempted

If the temptation persists through initial efforts to ignore it, then take some relaxing breaths and:

- Check how you feel. Are you wanting to be more alert or less? Will you suffer serious harm if you don't feel more or less alert right now? (Probably not.)
- Remember that psychoactive substances usually cause a nasty rebound later. Recall the mechanisms applying to the temptation you are facing.
- If appropriate, decide to do something else to energize or calm yourself, such as being physically active or doing a relaxation exercise.
- Think how you can be friendly and sociable without the substance, or decide to be alone or with real friends.
- Beware of just having a bit because of the risk of that turning into having a lot.
- Remember that symptoms of withdrawal are just that. Apart from your feelings they do not signal real world problems.

Then do the actions you planned. Ignore the feelings, do some exercise, or relax. Smile at people and ask for 'Just some water please.' Or go somewhere that is healthier.

4.5 Gambling

This category of temptation includes gambling in casinos, including online casinos, betting on sports, lotteries (even for charity), machines, and short term, speculative trading on financial markets, especially cryptos.

4.5.1 Decision characteristics

Relevant decisions include going to betting venues (e.g. a casino, betting shop, lottery seller, bingo hall), placing bets, and reacting to events that may require a revision of our bets when speculating on a market.

Complete abstinence is a sensible policy and so forming rules to govern behaviour is easy. Just don't do it.

Biasing factors include our desire for feelings of success and progress, pressures that build once we start to lose, and advertising.

4.5.2 *Personal policies and plans*

Although complete abstinence is the simplest and best policy³, alternative behaviours may need more thought.

These alternatives might include learning to be relaxed in the face of life problems that seem complex and perhaps insoluble. This involves scheduled, focused problem-solving efforts surrounded by mental and physical relaxation. This is instead of constantly ruminating about problems or trying to escape through gambling (which almost never works).

4.5.3 *Drawbacks of gambling*

In some cases the gambler is betting against a randomizing machine that is designed to make profits for the company involved at the expense of the gambler. On average the gambler will lose money. This is the case in roulette, for example.

However, the average loss of utility (i.e. value to the gambler) is more than the average loss of money. This is because, the less money we have, the more important each unit of currency is to us. Conversely, as we become wealthier, each extra unit of currency is worth a little less to us because we already have plenty.

For example, if we stand to gain or lose £10 with equal probability in a bet then the average money loss is zero. However, there is still an average loss of utility because the loss is more important than the gain of equal monetary size.

In other gambling situations, the gambler is betting against other gamblers or against professionals who set odds. In theory, it is possible to profit from this if we know more than the people we are betting against. However, in practice, it is very difficult to achieve this consistently.

³ The best policy for an individual who wants to avoid the harms of gambling. The best policy to suggest if you are trying to get someone else to

Games such as poker involved a large amount of luck as well as skill. If we are very good at playing poker then, on average, we can profit at the expense of other players. However, our rate of pay will be miserable unless the stakes are high and if the stakes are high then we could also lose a lot through a streak of bad luck. The problem of utility remains because even a skilled player can lose. Usually, we would be better off using our intelligence in a way that brings a steady and usually larger income doing something useful for other people.

Gambling carries the risk of much more than an average loss; it can ruin a person financially, causing stress and hardship to themselves and others close to them.

Gambling adds no real value to society. The gambler is not doing anything useful for another person or themselves. There is simply a transfer of money from one person to another, usually with a small percentage going to the people who organize the gambling venue. In this sense there is no such thing as gambling responsibly.

4.5.4 *Biasing factors*

Feelings of progress and success

If we are stuck doing some difficult but important task, or just feel stuck in our lives, then gambling may give us a sense of progress and occasional success. Even if, overall, we are losing money we may still experience more success than if we continue to bash our heads against the problems that we are stuck on.

We may even hope that a big win will provide the funds to solve all our major problems. A long shot, but perhaps worth it?

recognize their gambling problem and solve it may be something less off-putting.

In reality, gambling almost always makes our problems worse. It is better to have a short rest and then use the tactics discussed above under the discussion of digital play.

Escape from lifestyle change

If we are in a session of gambling and have lost a significant amount of money then we may be able to avoid the impact of that loss by continuing to gamble and winning the money back. Of course it is more likely that we will just lose more.

What makes this situation dangerous is the awareness that our losses may require a change to our lifestyles. If our losses are small then we may be able to continue living our lives just as before. Our financial reserves have been reduced but they are still adequate and we do not have to change the way we live. However, if our losses are large enough then we may have to change our lifestyles, for example by living somewhere less expensive, selling a car, or cancelling a holiday. Changing our lifestyles brings an extra penalty from the effort and stress of making the changes.

By continuing to gamble when we have made a large loss we will either:

- increase our losses, but we still must change our lifestyles; or
- reduce our losses, and perhaps avoid costly lifestyle change.

This is a dangerous situation where continuing to gamble may be rational, so avoid it. Do not start to gamble.

Sometimes the feeling that continuing to gamble is the best way out of the mess is illusory. We imagine that our losses are large enough to require a change in lifestyle when they are not. The only lifestyle change that would be advisable is to stop gambling.

Advertising

Almost every type of gambling is big business with many people trying to persuade us to gamble. Gambling businesses contribute nothing to society. No products or services are provided. Human labour is wasted. Money is simply transferred. No wonder the gambling businesses have to advertise.

They typically claim we can make money from gambling and that it will be fun. In reality, most punters lose money and lose more utility. What they call fun is really tension followed by either relief or disappointment. It's a kind of excitement but it's not sex or a running race.

4.5.5 Thoughts when tempted

If the temptation to gamble persists despite initial attempts to push it out of mind then:

- Consider if you are tempted because you are struggling with something else (so should rest and focus on the challenge).
- Consider if you are tempted because you think losses you have made are so serious that it is worth the risk of trying to win them back (which is very unlikely).
- Remember the poor financial prospects of gambling and the utility issue, which makes even betting with fair odds a losing proposition in utility terms, on average. Remember that a small amount of gambling can lead to losses that tempt more gambling.

Then, turn away from temptation. Put thoughts of gambling out of your mind. Stop without placing another bet. Withdraw your money from the market and do something more useful instead.

4.6 Infidelity and unsafe sex

Loving sex with a steady partner is a joy that should not be resisted. However, acts of infidelity and unsafe sex should be.

4.6.1 *Decision characteristics*

Decisions about potentially unwise sex take place when we get an opportunity and when we consider doing things that will make an opportunity more likely.

Temptation spikes when a rare opportunity arrives, particularly if we are also inebriated by alcohol.

The scope for making simple rules to govern behaviour is good because infidelity and unsafe sex can be avoided completely.

Biasing factors include worry over missing an opportunity, powerful sensations, persuasion, and alcohol.

4.6.2 *Personal policies and plans*

The main policy should be abstinence from infidelity and unsafe sex. Some effort may be needed to define precisely what counts as infidelity and research what counts as unsafe sex.

To successfully resist temptation it is important to decide what you will do instead. Specifically, what would you say to someone in a situation that was heading towards unwise sex?

4.6.3 *Drawbacks of infidelity and unsafe sex*

If your goal is just to have sex now – any sex – then go ahead. But if your goal is to have a loving relationship with someone who will share life's challenges as well as life's pleasures⁴, someone you could raise a family with, and someone you could grow old with then avoid infidelity.

⁴ If your goal really is just sex then your best strategy is still to develop a long-term relationship within which you and your partner can discover

Infidelity can destroy a relationship that might have blossomed. It can give us a reputation as untrustworthy in love that makes it more difficult to get that special someone to trust us. Infidelity is hurtful and shows a lack of concern for others.

If we are unhappy in a relationship and would rather be with somebody else then it is kinder and better for our reputations to end the failing relationship before starting a new one.

If we want to have sex with somebody then there is no need to risk unwanted pregnancy or sexually transmitted disease.

Even with modern medicine, some sexually transmitted diseases are extremely serious and will have a huge negative impact on our lives. HIV remains the biggest worry despite improvements in treatment but a severe case of asymptomatic chlamydia can leave a woman infertile. Most sexually transmitted diseases will be unpleasant in some way even if they can be treated easily.

The negative effects of unwanted pregnancy range from a couple of days of panic while we obtain a pill to terminate the pregnancy to a seriously compromised life looking after a child long before we are ready to do so and without a loving partner to share the burden.

Beyond our selfish concerns, the impact of unwise sex on others can be obvious. We might ruin a relationship that would have thrived, create a baby whose life will be blighted by poor parenting, or give someone a serious disease.

4.6.4 *Biasing factors*

Not missing an opportunity

One thought that may increase the desire to have unwise sex is the worry that the

what you really enjoy and do it for each other many, many times, just the way you like.

opportunity will not occur again. That may be true. Or it may be true that the opportunity will arise again, especially if we end an unwanted relationship first and take precautions against unwanted pregnancy or disease.

It may be best to make it clear that we 'definitely would' but want things to be properly arranged first.

The worry about missing an opportunity is probably instinctive and likely to be greater if opportunities have been rare. We have probably evolved to procreate quickly in an ancient world where most lives were short.

Powerful sensations

Powerful sensations propel us towards sex. The sight of an attractive person, their scent, their touch, even the feeling of a kiss or lick – all excite us. Once we start to become aroused these sensations become more powerful. What normally would be an innocent touch of two bodies in close proximity becomes thrilling.

The effect is intensified by encouraging body language such as smiles, eyes meeting, glances at our bodies, self-touching, eye blinking, and laughter.

An exciting environment or non-sexual activity can make us feel physically excited in a way that makes us more prone to sexual feelings and to finding others attractive.

All this makes the pleasure of sex salient and triggers our instinct to procreate. However, these sensations are largely irrelevant to whether the sex would be unwise. They are exactly what we would anticipate feeling and no reason to ignore our personal policy.

Persuasion

The other person may try hard to encourage sex. Perhaps they do not know there is a problem. Perhaps their

standards are different. They may try to make themselves as attractive as possible and send us exciting signals. They may try to get us drunk. If we show reluctance then they may try to persuade us, even offering excuses such as 'no one will know', 'it's just sex', 'you've got nothing to worry about', 'if you don't really like him/her, then what's the problem?', or 'I just feel so bad. I don't want to be alone. Please stay.'

Again, their efforts to persuade us are irrelevant to whether the sex is wise or not, especially if they are not aware of the potential problems.

Interaction with alcohol

Being drunk increases the risk of unwise sex. Many scientific studies have been published on this effect and it seems that the risks are different for different people.

It may help to be aware of this and either avoid alcohol or remind ourselves that we have had some and that, consequently, our feelings are an especially unreliable guide to sexual decisions. We will have to fight harder to remain in control and act in our true best interests.

4.6.5 Thoughts when tempted

If temptation persists despite initial attempts to brush it aside then take a couple of steadying breaths and:

- Notice if you have been drinking alcohol or taking something else that would impair your judgement. If so, make a special effort to get control.
- Consider whether you really would be missing an important opportunity, if suggesting good sex later would be better, or if sex with this person will never be wise.
- Remind yourself that, even if the chances of pregnancy or infection are low, the consequences could be life

changing. There is no point in taking an unnecessary risk.

Then stop doing things that are moving towards sex. If appropriate, show you like the other person and suggest a better plan or explain that you are in a relationship that needs to be properly ended before you will have sex with another person.

4.7 Overworking

What is the difference between working hard and overworking? When we overwork, one or more of our physical or mental systems is worn down faster than it can recover and this is maintained over time. If overworking is sustained then it can lead to injury or psychological collapse.

Most of us work hard, which means that we do something tiring and perhaps stressful for much longer than we would if we weren't getting paid. At the end of the working day or shift we are tired but we get some time to sleep and rest before we start again. We need a weekend or some other days off each week. We need holidays from time to time during the year, including a long one. If the opportunities we get to recover are not sufficient then we are overworking.

This is another vice where there is a fine line, difficult to draw, between vice and virtue.

4.7.1 Decision characteristics

Decisions about how much work to do occur when we make commitments that imply work, plan, and choose our next move from moment-to-moment.

The decisions are particularly difficult because the damage caused by overwork can build up slowly and imperceptibly.

We have excellent reasons for working hard. Usually, people value what we do for them and may even depend on us.

Profit is a function of time so the speed with which we work is important to the value we provide. Required work often fluctuates in intensity, sometimes unpredictably, and often we must be able to meet periods of high demand. We rightly wish to build and maintain a reputation as reliable and competent. We do not want to be late or do something wrong. That reputation helps secure our future income. People with a family to support have particularly strong reasons to work hard.

But those are also reasons for avoiding overwork. If we break down physically or mentally then our productivity may collapse for weeks, months, or even longer.

The temptation to overwork spikes when we have lots to do, people are depending on us, people keep asking us for things, or something stops us from taking our usual rest breaks.

Rules to govern work need to be refined because of the difficult decisions involved. Simple abstinence is not reasonable. We must work to do our fair share of what needs to be done.

Biasing factors include imperceptible damage, misjudgements of recovery, lost breaks, bullying, over-estimates of our abilities, job satisfaction, and a sense of being near to completion.

4.7.2 Personal policies and plans

The personal policies and plans that protect us from overworking are likely to be an integrated part of our approach to planning generally. They might include:

- Timed work periods, such as stopping every 20 minutes for a short break, using a timer app.
- Keeping track of the quantity of work done through periods of unusually heavy work so that extra recovery can be taken as soon as possible.

- Daily work and rest schedules.
- Work:rest ratios, which enable us to do extra work only if we have done extra recovery activities.
- Physical monitoring to detect subtle signs of damage not being fully repaired.
- An annual schedule of full rest holidays.
- Acceptable types of recovery activity.

4.7.3 Drawbacks of overworking

Overworking gradually breaks down our physical and mental systems. The specific problems depend on the type of work and how extreme the effort is. Some physical problems develop over years.

E.g. Prolonged typing at a desk can lead to tendinosis, tendinitis, and various specific problems with wrist, elbow, shoulder, and neck. Tension in the scalp and neck over several days can build up to a severe tension headache. Prolonged sitting or standing can lead to circulation problems in the legs. Prolonged driving and other jobs involving vibration can lead to numbness in the hands. In all these cases the body does not recover fully from the mild but prolonged stresses and strains put on it each day and the damage accumulates.

E.g. Prolonged, intense, psychological stress can affect our judgment and leave us feeling exhausted each day, struggling to sleep, and heading towards burnout.

The symptoms might be mild but irritating. Gradually they may start to make work more difficult. Eventually they may stop us working altogether.

We can recover from some of this damage if we rest sufficiently but some damage is permanent.

A very intense effort can also constitute overwork.

E.g. Workers who lift heavy weights can suffer serious injuries from just one episode including hernias and spine damage.

Damage we suffer from our work can affect others too. If we cannot help as much at home or with family members then they lose out. If the damage leaves us unproductive for a long period then this can cause financial problems for the whole family.

4.7.4 Biasing factors

Slow, asymptomatic damage

The damage from overworking may build up slowly and gradually. Often there is no pain or swelling to indicate damage.

E.g. Chronic tension can cause tendons to break down gradually (tendinosis). Although there is no swelling and no pain the collagen fibres lose alignment and the tendon weakens. The tension does not need to be intense, just protracted or repeated many times. All this time there may be no pain and no visible swelling. However, an intense strain on the tendon can cause it to become inflamed and painful (tendinitis). After perhaps months of weakening, a problem suddenly appears. With rest, the pain will go away within perhaps several days but the underlying weakness may take months to heal.

E.g. Sustained psychological stress at work can cause gradual problems with blood pressure and the heart. An expert might notice the symptoms but most of us would not.

Because we are unaware of the damage it is less likely to factor into our decisions about work. We must be alert for even weak signals of damage and use

theoretical knowledge to predict when damage is likely.

Misjudging recovery activities

Sometimes we overestimate our recovery. This biases our decisions about how much work we can safely do.

Recovery should not put a load on physical and mental systems that we rely on in our work.

E.g. Claire restores embroidery for 8 hours a day, 5 days a week. In the evenings she likes to curl up on the sofa with a book or smart phone game. This is not a good choice. Her job is sedentary, involves looking intensely at close range, and requires a narrow mental focus. This is the same as her rest activities. It would be better if she went for a walk, danced, or listened to music with her eyes closed.

E.g. Rob is an accountant and works all day at a computer sitting down. In the evenings he likes to play online computer games, often for hours. This too is a poor choice of rest activity. It involves sitting and using a computer with a narrow mental focus. Robert should instead try walking, exercising, yoga, meditation, or listening to music.

E.g. Amanda is a window cleaner and loves physical work in the open air. Her rest activities include gardening, oil painting, and rugby. She would be better off lying or sitting down, resting deeply. She could enjoy watching TV, playing a computer game, or reading a book. Oil painting may not seem strenuous but it uses the same shoulder and arm muscles as her window cleaning.

E.g. Dwayne doesn't like to waste a second. At work he is constantly on the go, trying to do several things at once. He experiences intense

psychological stress but quite likes it. He takes annual holiday reluctantly and tries to pack as much in as possible. If he goes abroad then he tries to see and do everything, taking selfies as he goes. This is not an effective holiday for him; it is just more of the same.

Another reason we may misjudge recovery activities is that some parts of our bodies take longer to recover than others.

E.g. Sore muscles from exercise usually recover within days but tendons take weeks and bones take months. Also we can feel more easily that muscles are sore.

People who exercise to strengthen their muscles need to be patient. Their muscles strengthen much more quickly than their tendons. If the muscles get too strong too quickly then they can damage the tendons, preventing further exercise.

Finally, it is widely thought that recovery usually takes a little longer as we get older, though the research on this is surprisingly mixed.

We should design our recovery activities to complement our work and be patient, especially as we get older.

Lost breaks

Sometimes, rest breaks that we would normally get or have planned do not take place. We sometimes work instead because we have nothing much else to do.

E.g. During the COVID-19 pandemic many people missed annual holidays. Some of those people probably worked instead. This was probably more common among people who worked for themselves.

Others worked from home instead of travelling to their workplaces. This

eliminated travel time and walking from their daily schedule, which some people filled with extra work or sedentary activities that were less effective rest.

E.g. Imagine someone who works from home in their own business designing websites. For recovery they take walks and go running and cycling, among other things. Then the person hurts their ankle and cannot walk for two weeks. During that time their usual rest activities stop, leading them to spend more time working at their computer.

We must notice when this happens and avoid accidental overwork.

Bullying

Our reasonable concerns about maintaining a reputation as a good worker can be exploited by people who want to make us work harder now. They may express unreasonable dissatisfaction with our efforts, hint that they are considering layoffs, or threaten consequences if we don't do what they say.

A more subtle form is where the other person exaggerates their dependence on our work.

We may need to remind ourselves when they are bluffing.

Over-estimating our abilities

Most of us think we are above average. We also tend to underestimate the time it will take us to complete tasks unless they are very small. We also underestimate the effect of competing demands that will make it harder to complete the task. This can lead us to make commitments to other people and ourselves that are unexpectedly hard to meet. (Sometimes your boss will do that on your behalf.)

The judgments are especially difficult if our work or career progress involves

taking opportunities as they arise.

Opportunities usually do not come in a steady, predictable stream. Instead, they come in unpredictable bursts. If we have been short of opportunities for a while, we naturally tend to jump on every opportunity that comes along. We can be overwhelmed by a burst of opportunities, failing to realize the risk until it is too late.

Even a perfectly rational decision maker can be caught out sometimes but bias makes this much more likely.

Overestimating ourselves can also lead to unrealistic ambitions and so to overworking. Work is not a competition to get to the top. It is an often-disorganized process by which we try to find roles that suit us. If we aim for a role that is too ambitious then we might waste effort trying and failing to get it. This is especially likely if we are pushed on by competition from other workers.

Conversely, if we get a prestigious and well-paid role we cannot do effectively without overworking then we are in the wrong role.

We must try to be realistic about our abilities and rate of progress, be aware of the risk from bursts of opportunities, and seek only roles that suit us.

High job satisfaction

Loving our jobs is another risk factor for overworking. It keeps us going longer. If working too hard is starting to cause problems then we may simply respond by doing more work.

We must remember that even enjoyable activities wear us down and require recovery time.

The mirage of completion

I sometimes catch myself thinking 'If I just finish this then I can have a proper rest.' The trouble is, just finishing the current task often takes longer than I

expected and along the way I think of other tasks I feel I ought to complete before I have that proper rest.

In reality, taking a few minutes of rest every 20 minutes hardly interrupts my flow at all and greatly reduces fatigue and strain. I just have to stop for a while even if I haven't completed my current task.

4.7.5 Thoughts when tempted

If temptation persists despite initial attempts to brush it aside then take a couple of steady breaths and:

- Notice your physical feelings of fatigue, strain, discomfort, and even pain.
- Think back over the work you have been doing through the day, the previous week, and even months before. Did you get enough recovery time? Was it effective?
- Consider whether your career really would be threatened if you stopped for a break now or reduced your commitments. Consider the risk of breakdown due to overwork.
- Check for other biasing factors.

If your conclusion is that you can take a break now then do it and use a recovery activity that is appropriate, such as resting completely. Do nothing and think nothing.

5. Unreliable methods

Several methods for managing temptation have been suggested by others that I do not recommend, even though they have worked in published scientific tests.

The common problem with these methods is that they amount to tricking ourselves. That is hard to do deliberately and vulnerable to thinking that undermines the credibility of the method. I strongly suspect they are ineffective in the longer term and that the positive results from

one-off, short-term tests, under the scrutiny of experimenters are misleading.

5.1 Self-imposed rewards and penalties

In this method we are supposed to promise ourselves rewards or punishments to increase our motivation for acting wisely. Ideally, those contingencies are put in place through a mechanism we cannot circumvent later.

These extra consequences are artificial, with no natural link to the actions involved. We decided them, so we can change our minds. Over time and without an eager experimenter watching we will probably let ourselves off and stop imposing the artificial contingencies in future.

5.2 Arbitrary temptation bundling

Temptation bundling involves devising a course of action that combines something worthy with something immediately gratifying (described in Kirgios et al, 2020). If the connection is a natural one then this can be effective.

However, if the link between the immediate gratification and the worthy effort is artificial then it is just the same as a self-imposed reward. We can change our minds and just have the immediate gratification.

E.g. Suppose a person resolves to go to the gym and exercise while listening to an amusing, low-brow podcast. The podcast is intended as an inducement to exercise but because it can also be enjoyed without going to the gym the person is at risk of rejecting the self-imposed restriction on behaviour.

5.3 Arbitrary goals

Some psychologists think that goals have an almost magical motivating power. If someone chooses a goal, even one with

no solid reasoning behind it, then they supposedly will be strongly motivated to do actions that help achieve that goal.

This does not agree with my frequent experience of wanting to achieve something and then changing my mind when I think of something better or realize my first goal was not achievable.

Goals are just mental objects used for some planning purposes. Underlying our choices of goals is our developing sense of what is in our interests. This is driven by understanding of the world, i.e. by good reasons.

If a person sets a personal goal without good reasons then it will have little or no influence on their actual behaviour. The influence will weaken as time goes on and reasons for changing or ignoring the goal develop.

5.4 Unjustified implementation intentions

Just as goals without justification are weak, so too are implementation intentions without justification. The intention may successfully remind us not to give in to a particular temptation, but when the moment arrives we may reconsider the decision and give in anyway.

5.5 Fantasy construals

A famous study by Mischel and Baker (1975) found that children were better able to resist a marshmallow (in favour of two later) when they were told to imagine the marshmallow was a cloud (rather than a sweet). This is described as an 'abstract' construal and as being 'cool' rather than 'hot'.

The key point about this construal is that it is factually incorrect. The marshmallow is not a cloud and it will be hard to continue thinking of it as one.

Construals must be factually correct and well-founded if they are to be durable.

5.6 Deliberate bias

Can we create stronger motivation to do something wise by spending time thinking of reasons in favour of that action and against the tempting alternative, carefully avoiding reasons that point the other way. I doubt it. This deliberately biased search for reasons attempts self-deception and undermines itself. We know what we did.

It is better to make an honest effort to get to truth. An objective rationale is likely to be a more accurate guide to decisions. It will be more robust in the face of evidence that is not enough to change our behaviour but allow change when the evidence justifies it.

6. Conclusions

Our vices, large and small, profoundly affect our lives. Reducing our vices is a challenge for most of us but with the right techniques we can make improvements.

Using rationality systematically, in the right way, can reduce the experience of temptation and simplify our decisions in the face of temptation. We can move from a suspicion that a behaviour is a poor choice, through temptation, and on to effortless virtue.

The first steps are to understand the true effects of our behaviours (defeating biases that make this difficult) and devise better behaviours for ourselves. Encapsulating our best thoughts as policies and plans then turns that thinking into practical self-guidance.

Next, understanding the mechanisms of temptation helps us apply our encapsulated decisions consistently and more easily, leading to improved behaviour and better lives.

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