Popular drugs



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Cigars and cigarettes



Cigarette Advertising from 60, 70 and 80's. Note how the forms of advertising were tightened from containing people who smoke (top), to only display the product (bottom left), then supplemented with warning about the harmfulness of smoking (Law 1977). Finally, to be completely banned.

Smoking now appears to be the one, of the drugs discussed here, that is at least accepted in our society.



Street art in Stockholm May 2010.

The label says "Smoking kills".

The practice also implements some disadvantages for the user, such as:

- Spending on tobacco products reduces the economic space to do other things.
- Smoking increases the risk of un-healthyness¹.
- The smoke makes the clothes and home smell bad.
- The practice reduces the smoker's fitness and sense of taste.

- The demand for cigarettes forces the smoker to go out on cold balconies or into smelly smoking rooms.

So why do people smoke?

^{1.} Smoking is believed to cause or aggravate a variety of nasty diseases, including (according to the website of the Centralförbundet för alkohol- och narkotikaupplysning (Central Union for Alcohol and Narcotics Information)): cardiovascular diseases, lung cancer, laryngeal cancer and other respiratory diseases.

Since most smokers quit the habit in adolescence, it might have to do with the situation as a teenager and young adult:

- Teens want to revolt against rules they have to undergo, such as not smoking.
- Smoking can be a part of group identity in some teenage groups.
- Handling of the cigarette and the lighter et cetera, may look cool and it gives teenagers something to do when they hang around doing nothing.
- Cigarettes are a relatively cheap drug and easy to get² for a teenager.

When the trials of the teens have passed, the break-up of the parents is completed and a stable selfidentity is established, it is for some perhaps quite easy³ to quit. In particular, as smokers often receive strong support from the environment in these endeavours. Some, however, continue to smoke at higher ages.

^{3.} The more people who smoke in a group or in a society, the greater the chance that people who are not really as cod on the use or the drug nicotine, will smoke. This is supported by data from Statistiska Centralbyråns (SCB, Statistics Swedens) interview studies about smoking habits. Among all those born in between 1937-1956, approximately 60% of the women and 70% of the men smoked daily at some point in their lives (SCB, Living Conditions, Report 114, alcohol and tobacco use), probably the majority of them smoked in the days when it was very popular to smoke. Today (year 2004-05) fewer than 25% of them still smoke, which means that more than half of them has managed to quit.

^{2.} A pack of cigarettes currently costs about 50 SEK, but it probably last a couple of days. And the age limit for buying cigarettes is 18 years in contrast to alcohol, where the age limit is 20 years. Which means a big difference because an 18-year-old person is still in high school and thus come into contact with even younger boys and girls. Unlike the 20 year olds who often live in a different host with a job or higher studies.

The majority (4 persons, table 1) of the seven⁴ smokers and former smokers who participated in this study, argued that the biggest advantage of smoking (and thus perhaps the reason for the practice) is that it is social and as many found it soothing. It may be due to the handling of smoking articles giving the smoker something to do, talk about or think about, which to some extent create a community and/or mental escape from the worries of the moment. Another possible explanation is that the smoke itself is socializing and reassuring because it contains the drug nicotine.

Almost all (6 of 7) the participating smokers and former smokers listed the smell of cigarette smoke in clothes and spaces that one of the disadvantages of smoking. In addition, some of them (3 persons) answered that health risks and/or costs (3 persons) are drawbacks. The majority of smokers (4 of 7) did, however, not consider that smoking have/had any significant negative effect on their economy. The question was: The cost of smoking/month and if it does/did that you could spend less on other things that you want to consume.

Two of the three who had never smoked thought⁵ that the only advantage of the practice is that the users can pause, the third of them thought instead that it tastes good and practice makes you feel tougher. Regarding smoking disadvantages they were fairly consistent with the smokers about that smokers smell bad (2 persons) and that the practice poses health risks (2 persons).

	(they answered freely).						
`	What do you think are/were the biggest Answe						
advantages	advantages and disadvantages with smoking?						
Pros	Tastes good	1					
	Cosy/nice	2					
	Cool	1					
	Nicotine kick	1					
	Social	4					
	Calming	4					
	Fell better	1					
Cons	Addicting	1					
	Expensive	3					
	Tastes bad	1					
	Poorer fittness	1					
	It brings suffering	1					
	Health risks	3					
	Smokers stinks/it stinks at home	6					

Table 1. Pros and cons of smoking according to the participants

Four of those involved in this study are smokers and three have been smokers, or is it sporadically. All smoke/smoked only cigarettes and their average daily consumption is/was 17 cigarettes/day. Which is more than the average among Swedish smokers: 11 cigarettes/day for women and 13 for men (SCB, Living Conditions, Report 114, alcohol and tobacco use)?

5. The question was: What do you think, who have never smoked, appear to be the main drawbacks and advantages of smoking?

Among all those who continue to smoke up in age, there are reasonably both users and abusers. The boundary between the two categories is unclear and probably varies depending on whether it is considered from a health, economic or social perspective. From a health perspective, it might be possible to draw a line based on health statistics, but to my knowledge it is not yet done. A limit based on economic factors would be difficult because the revenues and expenditures are so individual. Regarding social factors, it is even more difficult because there is no uniform view on the practice in our society. Since in some groups it is a social advantage to smoke. In other groups, however, smokers are more or less bullied and the use/abuse is thus a social burden.

The lack of a clear boundary between use and abuse was also reflected in the participants' responses regarding this (table 2). In one direction, there was a non-smoker who thought that all smoking is an abuse and on the other hand there was a smoker who thought that all smoking is a use, except if the smoker is pregnant or become ill from smoking.

Two of the interviewed⁶ considered their own smoking to be an abuse and two felt that sometimes it is an abuse, but usually it is not. While two others found they usually only uses cigarettes. The seventh in the group refrained from answering the question.

What do	you think is use/abuse of cigarettes?	Answers
Use	Dont excist	2
	1 pack/a week	2
	Smoke only when feeling like it	1
	Smoke only at parties	2
	Everything except smoking during pregnancy or if it makes you ill	1
	Everything except smoking used cigarettes is a use	1
	Not answered	1
Abuse	All smoking is abuse	1
	If one have to have a cigarette= abuse	1
	More than 1 pack/a week	1
	Pick up and smoke used cigarettes	1
	Chain smoking	2
	Smoking during pregnancy or despite that it makes you ill	1
	Smoke every day	1
	1 pack/day	1
	Not answered	1

Assume that the use and/or the ritual add something positive, such as a moment of peace and/or social community. In that case, the abuse could be the cigarettes smoker consumes without getting the benefits. Or when the immediate negative effects, such as to stand outside and freeze or smell bad, trumps the positive effects. Something that I think all smokers occasionally experience, as all of these participating smokers said yes to the question: *Has it happen that you lit a cigarette out of habit even though you did not really want it?*

^{6.} The question was: What do you think about your use?

Cigarettes are not the only type of smokes, but are predominant in Sweden, why?

The participants think (table 3) that cigarettes are the best/tastes the best, depending on how they interpreted the question. With the exception of two former smokers who preferred water pipe. One of the two, who preferred water pipe, is smoking cigarettes anyway because he felt that it was too cumbersome to use pipes. The other one, however, had no explanation for why she still smoked cigarettes.

Thus, the results suggest that many believe that cigarettes are tastier/better and/or less cumbersome than other varieties.

8								ernatives to cigarettes, that are stand who had never tried water pipe.
What do yuo think	Sn	noker	(inc	lusiv	ve fo	rmer		Average
about? (rank		sn	noke	rs) n	umb	er:		rank
5=highest)	1	2	3	4	5	6	7	
Cigarettes	5	5	1	5	5	4	5	4.3
Cigarillos	4	4	2	4	4	3	3	3.4
Cigars	3	3	3	3	1	1	1	2.1
Water pipe	2 []	Don't know	5	1	2	5	4	3.2
Common pipe	1	2	4	2	3	2	2	2.3

Table 3. The smoker's opinion of different kinds of smoking means. All smokers in the study smoked or dard pipe, For my own part, I thought, as a smoker, it was much larger difference between smoking a good and not so good cigarette, compared to other things I consume. I.e. I felt that many cigarette varieties were so disgusting that I did not like to smoke them to they were exhausted. Which much more rarely happened to me regarding any type of food, candy or drinks. Five of the smokers shared my opinion since they ment⁷ that the brand has pretty big importance, greater than ditto for food & drinks. The remaining two smokers did, however, on the contrary, think that the brand of the cigarettes is less important than the brand of different foods.

The results of the survey also suggest that many smokers considered the morning cigarette to be the best (table 4). Even more of the participants preferred to smoke while consuming alcohol. Which probably is common because such ingestion, in my experience, for the moment, even can convert non-smokers to smokers.

Which cigarett is/was the best. Rank the following	Smoker smoke	Average ranking						
alternatives (8= best):	1	2	3	4	5	6	7	
In the morning	8	8	1	8	4	8	6	6.1
Pre lunch coffe at work	Dont smoke then	3	7	3	2	2	2	3.2
After lunch	5	4	5	6	5	4	4	4.7
Post lunch coffe at work	Dont smoke then	2	6	2	3	3	3	3.2
After dinner	۰۲	7	4	5	8	5	5	5.7
On a Sunday walk	"	1	3	1	1	1	1	1.3
Togehter with alcohol	6	6	8	7	6	7	8	6.9
When smething troublesome has happened	² 7	5	2	4	7	6	7	5.4

Table 4. Best cigarette.

^{7.} The answers to the question: *Compared to other things you consume, how important is the brand of cigarettes you smoke/smoked?*

The use of tobacco products generates income to the community, but also problems and costs. For some people, it also brings suffering and/or costs, even if they themselves aren't users. For still others, such as Sweden's tobacconists, it leads to large financial revenues. But for the public and common systems, the social costs could be divided into:

A. Pharmaceutical and healthcare costs for patients caused by the use, and ditto for those harmed by others' use (indirectly injured).

B. Cost of sick days (sick leave), early retirement, and death before retirement, directly or indirectly caused by the use and loss of tax revenue due to that the patient or indirectly harmed couldn't work. C. Productivity reductions in the public sector that makes society forced to hire more people in order to achieve adequate production.

D. Tax losses since the drug is imported wholly or partly and thus generate tax revenues abroad, when alternative consumption instead had generated tax revenues in Sweden.

Since this money, if used for consumption of Swedish products in Sweden, would have generated tax revenue in several steps, it is difficult to guess how much of this money that would have ended up in the Swedish society funds. But, guess, that half of it had done it.

E. Repair and cleaning costs on public property because of damage caused by the use.

Societal income caused by the practice:

F. Sales taxes generated by the handling.

G. Costs that society will not have to spend since the user die an untimely death after he/she has retired.

However, what can not reasonably included the potential property damage and productivity reduction in the private sector, because it is not borne by society other than the need for more employees to reach the production demand, which is hardly detrimental to society if there is unemployment. But on the other hand, the salary taxes generated in the handling of the cigarettes can not be counted as income, because if the use did not exist, some of them that are currently employed with it, would do something else.

The above can be described by the following formula:

The total cost to society for a period = pharmaceutical and healthcare cost + sick days + early retirement days + productivity lost tax + revenue reductions in the public sector + $\frac{1}{2}$ x tax loss due to imports + repair and cleaning costs on public property because of damage caused by the use - sales taxes - life shortening after retirement.

In short (formula 1):

Societal costs = $A + B + C + \frac{1}{2} \times D + E - F - G$.

Folkhälsoinstitutet (Public Health Institute) has calculated certain social costs (Bolin K & Lindgren B, 2004:3) for 2001. If their data, combined with data from Statistics Sweden, is inserted into the above formula, together with guesswork, where data is missing, the result is:

A. According to Table 26 in the report, smoking costs about 2.2 billion per year in the form of health care and medicine, i.e.:

 A_{users} = 2.2 billion.

Probably society's health care costs due to indirect damage as a result of smoking are quite small, so we assume in this rough estimate that:

 $A_{\text{indirectly affected}} = 0.$

B_{early retirement users}: The amount of lost working years attributable to 2001 were calculated in the report by all adding together all the early retirements due to smoking related diseases and recalculate all the part time jobs to full-time ones. The report authors then came to 2608 years (table 13 in the report). If an early retirement cost society, say, 11 000 SEK per month in the form of sick leave pay and housing compensation pat are:

 $B_{tax loss early retirement users} = 2608 x 11000 x 12 = 0.34 billion.$

B_{early deaths users}: the number of lost working years for those who died in 2001 is estimated to be 7290 years (table 13). If the smoker's average income in 2001 was, say, 203 000 SEK/year (average income in 2002, SCB 2005, Table 377) the lost tax revenue is (in general the Swedish salary taxes sums up to about 30%):

 $B_{tax loss early deaths users} = 7 290 x 203 000 x 0.3 = 0.4$ billion.

B_{sick leave users}: No data presented in the National Public Health Institute report. But as sick leave (sickness benefits and rehabilitation benefits) cost about three times as much as the early retirement is assumed here that:

 $B_{sick leave users} = 3 \times B_{early retirement users} = 1$ billion. It all adds up to:

 $B_{users} = B_{early retirement users} + B_{tax loss early deaths users} + B_{sick leave users} = 0.34 + 0.4 + 1 = 1.74$ billion.

Probably there are only few people who are on sick leave, early retirement or dies as a result of indirect smoking, so we assume here that: $B_{indirect affected} = 0$.

C. If the proportion of smokers who work in publicly funded activities is as high as in the rest of society. I.e. about 20% of the public employees smoke on daily bases (SCB, Living Conditions, Report 114, alcohol and tobacco use, figure 5). Since 2001, 1.3 million people worked in the public sector (SCB; 2005, table 339), it becomes 260 000 smokers. Suppose that they on average smoke 6 cigarettes during work hours and each time take five minutes to complete it. Then every smoker generates a direct production loss of half an hour per day. Since we work about 46 weeks per year, the total production loss C = 260 000 x 46 x 5 x 0.5 = 30 million hours. Then the total production lost would be 30 000 000/(46 x 5 x 8) = 16 000 work-years. If this production loss would be replaced with additional staff, it would cost society about 203 000 x 16 000 = 3.3 billion SEK in wages. But since it probably is not so that the entire production loss is compensated with additional employees, one can not expect the full amount, but, say half, thus:

C_{users}= 1.6 billion.

It is assumed that: $C_{indirect use} = 0$.

D. In 2001 Sweden imported tobacco for about 1 billion SEK (SCB, 2003, Table 16.1), and we exported such goods for around 0.3 billion. Thus, the import gap for tobacco is 0.7 billion. Say half⁸ of that was in the form of cigarettes, then: D = 0.35 billion.

E. Since there are almost no public buildings (excluding prisons) where smoking is allowed indoors, repair costs for public property because of damage caused by the use will virtually be zero. However, the handling of cigarette butts in public places causes some additional costs for cleaning, say, 0.2 billion a year, i.e.:

E = 0.2 billion.

F. The total trade in tobacco generated tobacco tax to the state that sums up to about 8 billion (SCB; 2005, Table 456). Say that half⁸ of the tax came from cigarettes and the like. Additionally VAT, which was about 7 SEK/package (SCB; 2005, Table 406) = 0.4 per cigarette, and since there were about 7.3 billion cigarettes⁸ consumed, it gave 7.3 billion x 0.4 = 2.9 billion. In that case:

F = 2.9 + 4 billion = 6.9 billion.

G. The number of lost years⁹ after retirement due to smoking-related deaths in 2001 is in the report estimated to be 42 369 years (table 13). The strange thing is that the authors do not see this as an economic benefit for society. But everyone that does so will quickly realize that smoking provides an income to the community in the form of 42 369 years less in retirement pay. Say that an average retired in 2001 earned 10 000 SEK a month, including housing benefits. Then society "earned" 42 369 x 10 000 x 12 = 5.0 billion on this, thus:

 $G_{users} = 5.0$ billion.

It is also assumed that the indirect use $G_{indirect affected} = 0$.

Smoking societal cost = $A_{users} + B_{users} + C_{users} + \frac{1}{2} \times D + E - F - G_{users} = 2.2 + 1.74 + 1.6 + \frac{1}{2} \times 0.35 + 0.2 - 6.9 - 5.0 = -6.0$ billion.

Thus society gained on that people smoked!

- ^{8.} Since 2001, approximately 7.3 billion cigarettes were sold (SCB, 2005, table 249), and since a cigarette weighs about 1 gram will be 7.3 million kg of tobacco in the form of cigarettes. While it was sold 6.4 million kg of tobacco in the form of snuff.
- ^{9.} It calculated with the formula: the average life real life, for those who died of smoking-related illnesses in 2001, where the diseased were between 35-84 years. The amount specified in the report's table (table 13) is 49 659 years. But then include it both those who died before and after age 65, which of course both are "unprofitable" and "profitable" death. The profitable deaths are as calculated as total number of years of life lost years of life lost for those who died before 65 years = 49 659 to 7 290 years = 42 369 years.

Snuff

In the case of snuff is probably more difficult to identify an abuse compared with smoking. Since snuff for most users is probably a fairly small cost¹⁰, the identified negative heath effects¹¹ are few and not so serious and the use has probably little negative impact from a social point of view.

^{10.} Neither any of the five interviewed snuff users nor did former snuff users feel that snuff does/did have significantly negative impact on their economy. The question was: *The monthly cost and if it means that you have to skip some other consumption*. But even if snus consumption has little effect on the participants' economy, the price of snuff has increased a lot in the last 20 years.

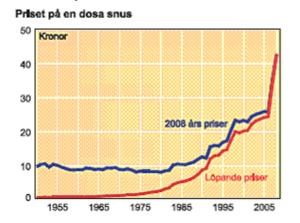


Chart from the Swedish statistical yearbook (SCB 2010) showing the price of snuff (blue) with the general inflation excluded.

^{11.} It appears to be poor evidence for that there is serious health risks associated with snuff, Vårdförbundet (The union for nurses and similar), for example, says on their website:

"The health risks of snuff are not as researched as the health risks of smoking. With support from the Folkhälsoinstitutet (National Public Health Institute) has therefore Institutet för miljömedicin (Institute of Environmental Medicine), in collaboration with Institutionen för

medicinsk epidemiologi och biostatistik at Karolinska institutet (the Department of Medical Epidemiology and Biostatistics, at Karolinska Institute) conducted a risk assessment of snuff use. Snuff contains approximately 2000 substances, some of which are carcinogenic. According to a balanced

assessment of experimental and epidemiological studies, the results indicate that Swedish snuff is carcinogenic. The form of cancer for which the epidemiological evidence mentioned is the strongest is cancer of the pancreas.

"Regarding cardiovascular disease continued research has given more knowledge. Snuff seems unlike smoking not to be an independent risk factor for the onset of myocardial infarction. In contrast, both epidemiological studies and animal experimental studies support the conclusion that the use of snuff increases the risk of dying from heart attacks due to increased risk of heart rhythm disturbances. Snuff is highly addictive. Nicotine prepares the brain for other drugs and increases the susceptibility of such alcohol. A high consumption of snuff also increased risk of obesity, high blood pressure and loss of teeth."

The cost, however, was the negative effect of snuff that most of the participating snuff users enumerated (3 of 6, see table 5). Moreover two of them mentioned that it might be detrimental to health, and two also answered that it is addictive. In addition, a number of minor concerns were raised, such as that it can be difficult to get rid of mountain of used snuff, or that it is bad when you are kissing. The latter, however, was contradicted by a non-snuff user who thought it tastes good to kiss snuff users. Two of the four non-snuff users answered that there is an advantage that snuff users can be drugging everywhere, even a snuff considered that, and two snuff users said that the practice is practical. The advantage, however, most snuff users lined up was that it tastes good (3 persons). This suggests that, overall, it is far from a unified view on advantages and disadvantages of snuff.

Though the strangest thing about the responses is that none of them deals with the drug effects. If they are negligible, so in that case why use it? The survey provides unfortunately no answer to that.

I started using snuff to keep my hunger feelings away, as I struggled to hold back on the food. In the fight snuff was a very effective tool that helped me to lose about 30 kg in weight.

What do y	ou think is pros and cons with using snuff?	Users	Non user
		Num	ber of yes
Pros	Tastes good	3	-
	One can use it everywhere	2	2
	Practical	2	
	It feels good, one whant to have something under the lip	1	
	Does not pollute the sorroundings compasred to cigarettee	5 2	
	Better than cigarettes from an health perspetive	1	1
	Tastes good to kiss a snuff user		1
	One have something to suck on		1
Cons	There are no cons	1	
	Unsocial	1	
	More yellow teeth	1	
	Tastes bad sometimes	1	
	Causes pain in the mouth	1	
	Bad for the teeth	1	2
	Unnecessary poisson	2	
	Bad when one wants to kiss	1	
	Some people are anoyed by the smell	1	
	Possible negative health effects	2	1
	Addicting	2	1
	Can be hard to get rid of mountains of used snut	ff 1	
	Must take it with me when travelling	1	
	Used snuff looks disguisting	1	

Table 5 Pros and cons of using snuff?

Just as for cigarettes, it seems that many consider the virgin dose for the day to be the tastiest (table 6). One explanation for this, that is also suitable for cigarettes, could be that it is the dose that has the most drug effect because the body before it has been "clean" for a longer period. The remaining doses were ranked more widespread and two of the consumers felt that they could not achieve any ranking at all, since they used the drug constantly throughout the day.

When snuff tastes the best	Snuff user (with	Average					
(7=best)	1	2	3	4	5	6	rank
In the morning	Dont know	7	Dont know	w 7	7	6	6.8
Pre lunch coffe at work		2		1	4	5	3.0
After lunch		6		3	6	7	5.5
Post lunch coffe at work		1		2	3	3	2.3
After dinner		5		6	5	4	5.0
On a Sunday walk		3		5	2	2	3.0
On a ski tour		4		4	1	1	2.5

For my own part, with experiences both as a smoker and a snuff user, I thought it was much less difference between a good and less good snuff brand compared with that of cigarettes, but larger than, for example, with beer. The majority of the participant snuff users, however, even think it is less important than that¹². In relation to the case of cigarettes it is supported by the fact that most snuff users I know, who previously used "General portion", now have chosen low price copies such as "Granite portion." Something most smokers I know, or have known, would not do.

By contrast, the form of snuff appears to be a major issue because I rarely see snuff users switch between different types. All but one of the consumers who participated in this study believed that portion is best (table 7). And to a question about which is more important: brand, type (non-portion/portion) or occasion, most (5 of 6) rated the type the highest. Then it was on average almost a dead race between brand and occasion. The explanation could be that the brand is of little importance, and that many users of snuff, as I, use snuff almost all day long.

What form of snuff do you think is best (rank)?		Snuffer (inclusive former snuffers) number:						
	1 2 3 4 5 6							
Non-portion	1	4	1	2	1	2	1.8	
Chewning tobacco	2	2	2	1	2	1	1.7	
Ordinary portion	4	3	4	4	3	4	3.7	
Mini portion	3	1	3	3	4	3	2.8	

Table 7. What form of snuff is the best?

^{12.} Four of six snuff users answered something that means "less important" to the question: *Compared to other things you consume, how important is the brand of the snuff you use/used?*

Nevertheless, just as smoking products, snuff generates revenue to the community, but also problems and costs. As for the public and common systems can social income and expenses be broken down the same way as regarding smoking, see formula 1 in the previous chapter, but the variables becomes a guess:

A-C. Suppose health care costs, early retirement, sick leave, reduced productivity and costs for users and indirectly damaged by the use of snuff are negligible, i.e.:

A - C = 0.

D. Suppose that half of the import deficit of tobacco products derived from snuff (0.35 billion, see previous chapter), thus:

D = 0.35 billion.

E. Reasonably repair and cleaning costs on public property consists primarily of cleaning. Say it's the same cost as for cigarettes, then 0.2 billion, i.e.:

E = 0.2 billion.

F. Say that half of the tobacco tax is generated in the trade of snuff (4 billion, see the previous chapter). In 2001, a package of snuff cost on average of 20 SEK (SCB, 2005, chart 405), therefore VAT on each package was 4 SEK. If a package on average contain 35 grams of snuff and it was totally sold 6.4 million kg of tobacco in the form of snuff (see footnote 8 in the previous chapter), the total VAT from snuff = 4 x 6 400 000 x 1 000/35 = 731 million. Overall, F becomes:

F = 4 + 0.7 = 4.7 billion.

G. I guess almost no one meets an untimely death directly or indirectly caused by the use of snuff, then:

G = 0.

Snuff's social costs = A + B + C + ½ x D + E - F - G = 0 + 0 + 0 + ½ x 0.35 + 0.2 - 4.7 = - 4.3 billion.

Alcohol

Alcohol is, next to coffee, the most socially accepted drug in Sweden. It is so well spread¹³ that it is rather they who do not use alcohol who must be held accountable and has to explain their position. Probably even more so than for those who do not drink coffee.

Unlike the other drugs discussed in this chapter, alcohol affects the brain so significantly that it becomes more difficult to work. Which may explain why, unlike coffee, cigarettes and snuff, the participants think it is best to drink alcohol in the evening and the least good to do it in the morning (table 8). The occasion is more important than the time (table 9) and both of these factors are more important than the type of alcoholic beverages offered or what temperature they then have. It could be interpreted as the right company, or with a good reason, any kind of alcohol would do even in the mornings.

When does alcohol taste the best?		Average								
Rank the following (8=best)		2	3	4	5	6	7	8	9	rank
In the morning	1	1	2	1	2	2	1	1	1	1.3
On a picknick	4	6	6	4	4	5	2	5	3	4.3
After lunch	2	2	3	2	5	1	4	2	4	2.8
With the dinner	8	7	5	7	3	3	7	4	5	5.4
After dinner	5	4	4	6	6	4	5	3	6	4.8
After work on a pub or similar	7	5	7	5	7	7	8	8	7	6.8
In the evening at a bar	6	8	8	8	8	6	6	7	8	7.2
When something bad has happened	3	3	1	3	1	8	3	6	2	3.3

Table 8.When does booze tastes the best, according to the nine participants who still uses alcohol.

Table 9.Is the right time more important than the right type?

What is most important:	portant: Drinker number:							ŀ	Average	
time, type,										rank
temperature on the beverage,	1	2	3	4	5	6	7	8	9	
Or the occasion? (Rank)										
Time of the day	2	3	4	4	3	3	1	1	4	2.8
Sort	3	1	1	1	1	2	4	2	2	1.9
Temperature of the beverage	1	2	2	2	2	1	2	3	1	1.8
Occasion	4	4	3	3	4	4	3	4	3	3.6

^{13.} Of all who live Sweden and are aged 20-84 years about 82% of the women and 90% of the men drink alcohol to some degree (SCB 2007). According to the same survey, the average consumption is around 2 to 2.5 bottles of wine per week for men and about 1-2 bottles of wine per week for women. Per day that is in average 20-25 grams of alcohol for Swedish men and 10-20 grams/day for women. Yet, the study pointed out that the figures are probably underestimates.

Compared with the previously discussed drugs is a hefty consumption expensive for many households. The nine participating alcohol drinkers spends, on average, about 1 400 SEK/month (median 700 SEK/month) on it. The majority of them (6 persons) considered themselves to be able to afford this without that their consumption was affected in general. Three of them, however, on the contrary, answered that it decreased their money for other consumption (The question was: *The cost of alcohol per month and if it forces you to forsake something else?*).

The cost suggests that the participants in median consume about the same as the average Swede¹⁴, though some of them consume significantly more. Since the participants earn about as average, one can probably conclude that for some or many drinkers, the economic arguments against the consumption are of less importance.

Though the practice may have very negative effects on the health. Centralförbundet för alkohol- och Narkotikaupplysning (Central Association for information about Alcohol and Other Drugs (CAN)), claims on their website that alcohol causes risk of: brain damage, gastritis, liver damage, increased bone fragility, varicose veins in the oesophagus, heart failure, pancreatitis, diabetes, muscular and nervous system damage.

The participants were asked, without having faced the above information, about the health problems that can be caused by alcohol consumption. The responses indicate that the knowledge of the risks is pretty bad spread, besides the risk of liver damage. This is because seven out of 10 respondents specifically mentioned liver damage as one of the health risks associated with alcohol consumption, but besides that they only lined up a few risks, such as:

Cow legged (1 answer); depression/anxiety (2 answers), kidney problems (1 answer); visual impairment (1); gastritis (1); diabetes (1); blood clots (1); alcoholic dementia (1); brain damage (1).

So they would not have gained many points if CAN's information would be hindsight and my interview had been a test. The results thus indicate that even among educated drinkers (7 out of 10 participants have studied at the university), knowledge about the risks of alcohol consumption is limited to generally only include liver damage.

^{14.} The average consumption for Swedish men the years 2004-05 (SCB, 2007), corresponds to about 8-10 bottles of wine per month, to the cost of 300 SEK/month and up. When the aggregate gross median income for Swedish men in 2005 was 21 250 SEK/month (SCB, 2009) it means that we in median invested at least 1% of our gross income on alcohol.

The perception of what constitutes a hazardous consumption also appears to be different among the interviewees since they on the question: *What is a hazardous consumption from a health perspective?* Answered:

To drink every day, drink every morning and throughout the day, 3 beer/day, 25 units per week or more, more than 4 cl of spirits/day, when the use is more detrimental than advantageous, more than 9 standard drinks/week for a woman, a bottle of spirits a day, do not know, more than 2 beer/day.

For their own part four of the nine who still drinks alcohol thought that their consumption poses health risks. The question was: *And what about for yourself*? Yet they choose to continue drinking beyond the limit for what they believe is a safe consumption, why?

That could be because, as briefly described below, there are several bids on what level of consumption that is harmful. It may in turn be due to different sources of information have different viewpoints on alcohol issues, from that all consumption is bad to that responsible drinking is positive.

CAN claims¹⁵, based on a health perspective, that more than 1-2 cans of beer a day are a risky consumption. While it is not risky according to a test of alcohol habits published in the Swedish daily Svenska Dagbladet on 23 May 2010.

The latter test contains ten questions, that each can give 0-4 points. These scores are added together to a total. If the total exceeds seven points the drinking is risky. Of the ten questions three quantifies the average consumption and a daily consumption of two cans of beer gives six points (to get maximum points on these questions it requires a consumption of at least five cans of beer a day). The other seven questions are about attitudes to alcohol, and the social and psychological consequences, and these questions gives at a maximum 28 points. Thus the test designers think that these factors together are more important than the actual consumption in the assessment of someone's drinking habits.

Which seems reasonable since the consumption for the majority of us, probably do not destroy the economy. And most of the adverse health effects are likely to show up after such a long time of over consumption, that they do not seem relevant as a threat. But for those who, for example, become violent during the intoxication, the negative effects come directly and they are very real. The reasoning of what, for the moment, is a use or abuse of alcohol could thus be summarized in:

Abuse is a use that leads to significant drawbacks for the user.

Of the 10 interviewees four mentioned arguing and fighting in the response to the question: *What do you generally think are disadvantages, from a social point of view, in that people consume alcohol*? In addition, the responses were spread among different potential drawbacks. None of them considered themselves to cause any major social problems when being drunk. Something that I can basically confirm. So in that respect the practice is in the current situation relatively safe for the participants.

^{15.} From CAN's website:

"How much you can drink without risk is impossible to say - there is no completely "safe" alcohol consumption. Some guidance is given, however, of the following risk limits: If we applied the same safety margins for alcohol as other substances in our environment - then you should not drink more than 7 grams of alcohol per day. This corresponds to about a bottle of light beer a day. This applies to healthy adults. At about 20 grams of alcohol per day (equivalent to about a can of strong beer), one can see clear liver damage in women. At 40 grams (two cans of beer) there is an emerging risk for men to get liver damage. If you drink more than 70 grams of alcohol per day - a bottle of wine or 20 cl spirits – you are definitely at risk for severe alcohol-related harm."

Another reason that some of the participants continue with what they believe is a risky consumption of alcohol is possible that they have had a lot of fun and sex when they have been drunk (table 10). It is perhaps worth the increased risk of poor health in the future, because who does not choose a more enjoyable but possibly slightly shorter life than the other way around?

Positie and n	egative experiences due to alcohol?	Answers
Positive	Lots of fun	6
	Many occasions that have become nicer	1
	Met girls/boys, have had sex	5
	Problems have temporarily disappeared	1
	Got clooser to people	3
Negative	Memory latches	1
	Missed funny things since i've been sleeping	ng 1
	Said stupid thing	3
	Done stupid thing	4
	Vomiting	3
	Fights	1
	Hangovers	2

Table 10.Positive and negative experiences due to alcohol.

We are affected differently by alcohol. Some become irritable, others joyful, still others appear to mostly get tired and taciturn. This is supported by that the participants described the symptoms quite differently, especially when they have been severely intoxicated (table 11).

At small intoxication, there was a degree of consensus that it makes you happy and excited. The effect seems, however, judging from the responses, to decline with increasing intoxication. And to reach the "goal" for an evening with heavy drinking appears according to the answers to be pretty negative, because all the effects enumerated appears to be rather negative. Yet people put a lot of effort into end up there, why?

	d normal effects of slight,	Answers
average and heav	y intoxication from alcohol?	
Slight	Dizzy	1
	Нарру	5
	Relaxed	2
	Feeling better	3
	Creative	1
	Less shy	3
	Cheered up	4
Average	Glad	4
	Fell like vomiting	1
	More opend	2
	Cheered up	2
	Increased wellbeing	3
	Less shy	2
Heavy	Tired	3
	Hungry	1
	Says/does crazy things	3
	Vomits	2
	Just troublesome	1
	Unstable	3
	Headache the day after	1
	Unclear speek	1
	Bad memory	1
	Bad patience	1

Table 11.	A summary of the participants' free responses to the question about which
	effects they feel that alcohol has on them, at different intoxication level.

A reasonable guess is that it in our quest to have fun we sometimes accidentally take too much of a good thing. And it may be because we react differently powerful, from time to time, to the same amount of alcohol. This in turn may be due to variations in factors such as: hunger, fatigue, sorrows or joys. We hope that we just this time will feel better with more beer, we gamble and sometimes it goes well, other times not. Or maybe we simply do not think about how much we have consumed at the moment and therefore do not realize that it is time to end.

Stockholm University (Jarl J et al., 2006:37) has, for 2002, estimated the majority of the data required in formula 1. These data, combined with ditto from Statistics Sweden (SCB) and guesswork gives:

A. According to the report alcohol cost about 2.2 billion (chapter 3.1) in the form of medical care and medications. In addition the costs for social care were estimated to be 4.0 billion (paragraph 3.2).

 $A_{users} = 2.2 + 4,0 = 6.2$ billion.

The social care for children with addicted parents costs 1.8 billion. In addition, the authors also estimated the health care costs for the proportion of crimes: drunk driving, murder, assault, rape, arson, vandalism, violence and threats against officers, that is considered to be alcohol-related, to 0.12 billion (table 5: health care costs), so :

 $A_{indirect injured} = 1.8 + 0.12 = 1.9$ billion.

B. $B_{sick leaves}$, = 4.3 billion (table 10).

 $B_{early retired users} = 2.4$ billion. The authors of the report have then subtracted the estimated fraction of early retirements that are avoided as a result of alcohol's beneficial health effects. The total loss of earnings due to death was estimated to be 3.1 billion. If the average taxes they pay is 30%:

 $B_{early death users} = 0.9$ billion.

Which ultimately results in:

 $B_{users} = B_{sick \ leave} + B_{early \ retirement \ users} + B_{early \ death \ users} = 4.3 + 2.4 + 0.9 = 7.6$ billion.

Probably there are few who are taking early retirement, et cetera due to someone else's use, so we assume in this rough estimate that:

 $B_{indirect affected} = 0.$

C. It is difficult to make any reasonable estimate of the loss of production in the public sector because of intoxications and hangovers, partly because it is so personal, and depending on the tasks. Though in any event, there is certainly a certain cost. Say it cost society 0.5 billion, i.e.

 $C_{users} = 0.5$ billion.

Say, for simplicity, that: $C_{indirect affected} = 0$.

D. We imported in 2002 alcoholic beverages for about as much money as we exported the same (SCB; 2003, table 16.1-16.2). Thus:

D = 0 SEK.

E. Society has to carry the costs of repairing public property due to alcohol-related damage, cleaning of public places/spaces and expenses for police and judiciary. The report authors summarized the latter to 2.5 billion (table 6: prison, police and judiciary, and breath samples). I have no idea what the first two costs may have been, but, say, presumably, that they cost 0.5 billion each. In addition, the researchers estimated the cost of research on alcohol and prevention of alcohol problems, to 0.5 billion (table 7), i.e.:

E = 0.5 + 0.5 + 2.5 + 0.5 billion = 4 billion.

F. The total trade of alcohol generated in 2002 alcohol tax to the state of about 11 billion (SCB, 2005, table 456). The same year it was sold alcoholic beverages, excluding low alcohol beer, for a total sales of 33.7 billion (SCB; 2005, table 246). Which means that VAT on alcohol sales brought in 6.7 billion to the governement¹⁶. In that case, F = 11 + 6.7 billion = 17.7 billion.

G. The number of life years lost for those who died in 2002 of alcohol-related causes was estimated to be 64 000 years (Chapter 3.5), but the figure booth includes productive life until "normal" retirement age and years as retired. The latter are not reported separately, but overall, it's probably far more pension years than productive years that are lost. So if 2/3 of the years are attributed to people who had reached retirement age, it is reasonably no overstatement. But according to the author of the report 36.000 years of life was saved due to moderate alcohol consumption. These effects will save the most lives of older women. Say that, presumably, 2/3 of those years that are saved are pension years, thus a cost to society and 1/3 are productive years saved (= revenue) that we for simplicity subtract from the cost. Overall, this means that the pension years that society will not have to pay is 64 000 x 2/3 - 36 000 x 1/3 = 30 600 years. Say that the average pension in 2002 was 10 000 SEK per month including housing cost compensations. The society gained 30 600 x 10 000 x 12 = 3.7 billion on alcohol drinking pensioners who died too soon. This means that:

 $G_{users} = 3.7$ billion.

Say again, for simplicity, that no one dies after retirement because of someone else's drinking, that is:

 $G_{indirect affected} = 0.$

Alcohol societal costs = $A_{users} + A_{indirect affected} + B_{users} + C_{users} + E - F - G = 6.2 + 1.9 + 7.6 + 0.5 + 4 - 17.7 - 3.7 = -1.2$ billion.

The suffering that the drug causes a third party is more difficult to quantify financially. The least bad way is to add all the compensations which the district courts decided that should be paid to those affected by alcohol-related crimes. But probably only a fraction of all the crimes done by drunken people is reported. The real figure is thus probably so large that it is pointless to even try to make an estimate.

^{16.} In addition, the state trade in alcohol, in 2002, generated money to the state in the form of 0.08 billion from the governments chain of alcohol shops (Systembolaget, SCB, 2005, table 456) and probably much more from their company for making spirits (AB Vin & sprit). But the latter income is recognized only as a lump sum, together with the dividends from all other government owned companies. So for the sake of simplicity, these earnings are not included in the calculation.

Coffee

Coffee is probably the drug, of the drugs discussed here, which is the most socially accepted. And compared to the other, it is the drug that, among the interviewed users, is consumed to the most moderate extent. Since on average they only drink/drank three cups per day (median: 2 cups/day). Despite this, in relation to other drugs, low consumption, the interviewees mentioned a range of physical effects that they attribute to the use (table 12).

Though few or no long-term health risks are identified, and coffee isn't more expensive than that the consumption has a very small negative effect on anyone's economy. In addition, any adverse effects from a social point of view are probably very small. Though for some reason, they consume the drug in a much more moderate extent than other drugs, why?

What effects does coffe have on you (consider for instance the stomach, awakeness, sleeping problems, wellbeing)?	Answers
Laxative ¹⁷	5
More awake	2
Hard to fall asleep if I drink in the evening	7
Gives wellbeing	2
Abstinence if I don't drink	3
Feel like vomiting	1
Clearer in my mind	1
Can give stomach pain	2
Non	2

 Table 12.
 Coffee's effects according to eight coffee drinkers and two former coffee drinkers.

^{17.} The laxative effect from the morning coffee that some people experience can in part be due to that the digestive cycle comes to the emptying position some time after waking up, no matter what you drink for breakfast (Klein S, 2008).

It could be because coffee does not create the same cravings as the others discussed drugs. Which in this case, probably is because coffee does not make the users happier and/or calmer. But some of the participants believe that coffee brings these feelings (table 13), so the explanation may lie in something else.

Table 13.	Pros and cons of coffee.	
What do y and disad	Answers	
Pros	Makes me awake	2
	Gives wellbeing	3
	Laxative in the morning	2
	Tastes good	2
	Social	3
	Relaxing	2
Cons	Laxative	1
	Affects the stomach	2
	Creates addiction	4
	Hard to sleep at night	3
	Doesn't taste very good	2
	No cons	1

I know no one who regularly consumes coffee in the same amounts as those who, when possible, consume alcohol. Though I remember times when people have complained over various symptoms of coffee overdosing. Probably it didn't give more pleasure than that with time they learned to avoid doing so. If so, in general, it may be the answer, and it may also explain why we encounter so few obvious cases of coffee abusers.

Most participants thought that, like the case with alcohol, the moment is more important than the type of coffee (table 14), which in turn is slightly more important than the method of preparation. But the differences in average ranking between the alternatives were significantly less than for alcohol. Which presumably is due to that the use of coffee, among the participants, is more routine based. Something that the scattered ranking of which time the coffee tastes taste best, suggest (table 15). Most, however, rated the morning coffee the highest. One explanation for this may be that it is when they most need its drug effects, because it mainly consists of that it makes the user becoming more alert.

Table 14.What is most important?											
What is the most important the coffee type, the preparation method or the occasion (rank)?		Coffe drinkers (inclusive former drinkers) number:									
		2	3	4	5	6	7	8	9	10	
Coffe type	1	2	3	3	3	1	3	1	1	2	2.0
Preparation method		1	2	2	1	2	1	2	3	1	1.7
Occasion	3	3	1	1	2	3	2	3	2	3	2.3

When coffee is the	Coffe drinkers (inclusive ex drinkers) number:										Average ranking
best (7=best)	1	2	3	4	5	6	7	8	9	10	
In the morning	7	7	7	7	3	7	3	7	1	7	5.6
Pre lunch coffe at work	3	4	6	3	6	6	7	2	6	4	4.7
After lunch	2	5	5	6	4	3	6	3	3	6	4.3
Post lunch coffe at work	1	1	2	2	7	2	1	4	5	3	2.8
After dinner	4	3	1	5	5	1	4	1	2	5	3.1
On a Sunday walk		2	4	1	1	4	5	6	4	2	3.4
On a ski tour		6	3	4	2	5	2	5	7	1	4.1

Societal revenues because of that coffee increases alertness are difficult to estimate and the costs of any gastritis or other coffee-related morbidity are to my knowledge not calculated. However, data are available for the handling of it, and if these are used in formula 1, the cost can be estimated to:

A-C. Suppose the costs for health care, early retirements, sick leave, reduced productivity and the costs for direct and indirect damage caused by coffee are negligible, i.e.:

A - C = 0.

D. In 2001, we imported coffee for 1.65 billion (SCB, 2003, table 16.2), and we exported for 0.36 billion. Thus, the import gap for coffee is 1.3 billion, i.e.:

D = 1.3 billion.

E. Reasonably, this cost consists of the costs for handling of the coffee and its accessories, i.e. cleaning the coffee maker, washing the cups and the like, in public administration. Say that the cost is 0.4 billion/year. In addition, the society has costs due to the purchase of coffee to the staff. Say that everyone who works in the public sector consumes the equivalent of 8 kg of coffee per year, and in the year 2001, there were 1.3 million people in the public sector (SCB, 2005, table 339), so, they consumed 10 million kilograms of coffee while working. A kilogram of coffee cost, in 2001, 46 SEK excluding VAT (SCB, 2005, table 406), then the cost was 0.4 billion.

Together, the E = 0.4 + 0.4 = 0.8 billion.

F. The net import of coffee was, in 2001, 83 000 000 kg (SCB, 2003, table 3.16) and the VAT was 25% and a kilogram of coffee in 2001 cost in average 58 SEK including VAT, the VAT on the same was 12 SEK/kilogram. Overall becomes:

F = 83 000 000 x 12 = 1 billion.

G. Reasonably, this social benefit is very small, type:

G = 0.

Coffee_{Social Cost} = A + A + B + C + ½ x D + E - F - G = 0 + 0 + 0 + ½ x 1.3 + 0.8 - 1 - 0 = 0.45 billion.

Costs to society for the use of the drug coffee was thus quite small and it might be completely offset by that all publicly employed coffee drinkers got slightly more alert and thus it enabled a more efficient work performance.

The study design and the participants

The data presented here are, in addition to data that is accompanied by a reference, generated by structured interviews that I have done with ten people (7 men and 3 women). Their average age at the time of the interview was 45 years (median: 46.5 years, min-max: 37-49 years). They had varying levels of education, occupation, income, family and housing conditions. Four were cigarette smokers, and three had been, the other three have never been smokers. Five were snuff users and one had been. Nine were users of alcohol and the tenth had been. Eight of them drank coffee, while two had stopped doing that

The questions in the interview are reported in their exact wording next to the respective accounts of the answers (besides that the they are translated to English).

The procedure used has both pros and cons regarding the degree of truth in the answers and how relevant the answers are for people in general, mainly (+ advantages, disadvantages -):

- The sample is small and not representative for the entire population.
- + Since it was interviews and I held the pen, I could to a greater extent assure that the respondents thought about the answer compared to if the respondents had written down the answers themselves. In addition, I was able to, to a higher degree, ensure myself that I understood their responses compared to if I had only been obliged to interpret what they had written.
- Although the respondents appeared to understand what was meant by each question, it does not mean that they actually did it. From that respect open interviews had been better since they are not stopping with a short answer.
- Everybody's opinion changes a little from day to day, so the responses only partially captured true positions.
- Questions about quantifying something reasonably give very different answers depending on the language and the frameworks the answering person uses. For example, the real difference may be less for a person who says that the difference is huge compared to someone who says that there is some difference. The effect is, however, neutralized to some extent when the respondents are asked to rank different phenomena's.
- +/- The answers are partly based on open-ended questions, which have the advantage that the participants to a lesser extent are controlled by the optional answers and they had better opportunities to take up various aspects in their responses, compared to when using a questionnaire with suggested answers. The downside is that some of them may have forgotten to mention some experience that they, if it had been check questions, had responded that they shared.

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