Chapter 10

How to camouflage ethical questions in addiction research

Alfred Uhl

> As long as thinking is enjoyable it has not yet started.
>
> Deschner[1]

Policy research is commonly presented as a value-free endeavour but, logically speaking, practical conclusions cannot be derived solely from facts. In research methodology, to attempt to do so is termed the 'Naturalistic Fallacy.' Consequently, the term 'evidence-based policy' – if interpreted literally – constitutes a contradiction in itself (oxymoron). This chapter will also deal with several other fallacies that are encountered in empirical addiction research, will reveal some popular concepts to be inconsistent and illogical advocacy tools, and will argue that the specific role of a researcher is completely incompatible with the role of an advocate for certain ideas and/or interest groups.

The aim of the chapter is to describe and analyse some common logical fallacies in addiction research – particularly some fallacies that camouflage ethical questions – illustrated by some simple examples. I shall not distinguish between fallacies where the perpetrators were victims of their own inadequacy (paralogism) and situations where others were misled on purpose (sophisms), as I am convinced that error and deception are not two distinct categories, but two extremes, with most cases located on the continuum between them. Psychoanalysis tells us that human motives are rarely fully conscious, and dissonance theory tells us that it often easier to deceive oneself than to deliberately deceive others – at least in the long term. Many of the fallacies and the related practical examples discussed here are not difficult for researchers to understand, and have been well known for a long time among methodologists and epistemologists. The following examples are a rather unsystematic selection of unusual perspectives, descriptions of logical flaws and elaborations on methodological problems, put forward to enhance

thinking both along critical methodological lines and about the ethical basis behind practical conclusions.

Professionalism – or the 'Wishful Thinking Fallacy'

A few years ago, I gave a lecture on research problems to preventionists and therapists, and a renowned researcher sitting with me on the podium remarked loudly 'I know you are right, but you must not discuss such matters openly in front of these people!' He was even more upset when he realised that his remarks had been heard by the very audience whose trust in science he did not want to jeopardise. This behaviour, located somewhere between wishful thinking[2]* on the one hand and deliberately withholding elements of truth for the sake of professionalism on the other, makes it difficult to address uncertainties, ambiguities in terminology, empirical and logical contradictions, and value conflicts. Colleagues undermining a professional reputation by asking nasty questions and putting the finger on weak spots are not welcomed as individuals trying to advance research, but rather are rejected as defeatists working against their own interests. However, this position is very short-sighted. Creating the unrealistic myth that every task can be accomplished puts those who nourish this myth and their colleagues under pressure to achieve impossible tasks. Systematically camouflaging problems allows them to pile up unsolved, until eventually the flawed constructions are uncovered and the reputation of the whole profession is diminished.

Values, ethics and the 'Naturalistic Fallacy'

Statements can be dichotomised into descriptive statements (factual judgements about what is) and prescriptive statements (value judgements about what ought to be done). The latter are referred to as ethical judgements. It is well accepted in philosophy (Hume's Law†) that ethical judgements cannot be derived logically from empirical facts alone.[3] Any syllogism to arrive at ethical conclusions requires at least one ethical premise as well. The flawed idea of basing ethical conclusions purely on empirical facts was called the 'Naturalistic Fallacy' by Moore,[4]‡ and has become a well-known term in research methodology. On the basis of facts, only factual conclusions can be derived. However, this does not

* The 'Wishful Thinking Fallacy' refers to rejecting something solely due to wishing that it were not true.

† Hume: 'Reason has no influence on our passions and action. It is in vain to pretend that morality is discovered only by a deduction of reason.'

‡ Moore: 'But if he confuses good, which is not in the same sense a natural object, with any natural object whatever, then there is a reason for calling that a naturalistic fallacy.'

mean that ethical issues cannot be a topic for empirical research – the opposite is true. It is essential to identify implicit value judgements and to make them explicit. Only if all implicit value judgements in our scientific reasoning are made explicit is it possible to analyse whether the ethical premises are consistent with each other,* with basic ethical principles and with factual evidence.† I have previously termed the process of identifying and analysing implicit values in research 'ethical evaluation',[5] but this term is ambiguous since it could mean either 'to conduct evaluations according to ethical standards' or 'to evaluate the ethical content in research.' More precise is the term 'evaluation of implicit ethics' or the almost synonymous 'evaluation of implicit values.'

Evidence-based policy

If we look into the history of medicine and other human sciences and consider how many researchers continue to aggregate questionable research findings, common-sense assumptions and wild speculations into conclusions that are then presented as solid scientific facts, it undoubtedly makes sense to demand that research should be 'evidence based', in the sense of 'conscientious, explicit, and judicious use of current best evidence', as defined by Sackett.[6] However, we must be aware that in most fields of human and social sciences our conclusions – even if we do our best – will remain somewhat uncertain and ambiguous. In most areas, decisive studies in the sense of well-designed, randomised, controlled trials (RCTs) are far beyond reach. As Hartnoll[7] put it, we have to understand research as

> a process where relevant questions evolve, where existing evidence is put together as in a puzzle, where missing pieces are temporarily added based on common sense and logic, and eventually clarified through further research. A researcher, according to this conception, is like a detective who systematically collects and assembles evidence until the case is solved.

If we understand the term 'evidence-based' as Sackett defines it and, in line with Hartnoll's concept of research, if we accept that practical strategies require decisions about ethical principles as well, there is absolutely no objection to the term – but this is not the way that the term 'evidence-based' is commonly used and interpreted. Usually the term carries an aura of 'independence from subjective values' and

* For example, the ethical principle of offering the best treatment available to patients is sometimes in conflict with the ethical principle that mature and sane individuals have a right to reject treatment that they do not believe in.

† For example, the ethical principle of offering the best treatment available to patients requires a knowledge of what is the best available treatment.

'proven beyond doubt', which is doubtless inadequate and misleading. The term 'evidence-based policy', if understood as derived solely from evidence, is a contradiction in itself – a 'Natural Fallacy' related to the value-free science myth. The impression of 'proven beyond doubt' is equally unacceptable. To print 'evidence-based' on the covers of medical books like a seal of quality – a popular fashion – is a good example of what Pirie[8] called the 'Fallacy of Blinding with Science.' The notion that authors believe their work makes optimal use of logic and empirical evidence is certainly not new, but until the term 'evidence-based' was coined, declaring this openly was considered arrogant and conceited. Using this new terminology, this presumptuousness can now be presented as a neutral commitment to a specific methodological direction.

Proposed alcohol control policy and the 'Naturalistic Fallacy'

In terms of alcohol control policy, it is important to realise that there are two very distinct perspectives concerning alcohol use in the western world. One perspective is that of the Northern European and Anglo-Saxon 'ambivalence cultures', in contrast to the attitudes in Alpine and Southern European 'tolerance cultures', as Pittman[9]* expressed it. The traditional approach to alcohol in the ambivalence cultures is 'paternallistic/controlling.' The traditional attitude towards alcohol in tolerance cultures is to discriminate strictly between moderate alcohol consumption, as a cultural value and source of pleasure, and alcohol abuse and addiction as problem areas. Consequently, the preferred intervention strategy from the tolerance position is 'democratic/emancipatory', in line with the health promotion concept defined by the World Health Organization (WHO) *Ottawa Charter*.[10] The latter concept does not aim at restricting responsible alcohol use, but rather to reduce the factors influencing transition from responsible use towards problematic use and addiction.

The most important current book in the alcohol policy context is *Alcohol, No Ordinary Commodity* by Babor *et al.*,[11] the third in a series of WHO-sponsored publications, written by alcohol researchers from countries with ambivalence cultures. Since ambivalence cultures had perceived alcohol as a major problem for many decades, they invested much money in alcohol research, while the tolerance cultures did not. As a result, there are now many highly distinguished alcohol researchers from an ambivalence culture background, and hardly any to counterbalance them from a tolerance culture perspective.

* Pittman, in relation to alcohol use, discriminated between 'abstinent cultures', 'ambivalent cultures', 'permissive cultures' and 'over-permissive cultures.'

To avoid any misunderstanding, let it be said that *Alcohol, No Ordinary Commodity* was written by some of the most distinguished researchers in the alcohol policy field. It gives a good overview of the relevant empirical literature, in most parts it analyses contradictions and ambiguities within this field of research quite realistically, and it admits that the results are far less consistent and conclusive than one would desire. It can without question be accepted as a standard reference work in the field. On the other hand, the book is clearly written from the perspective of the ambivalence cultures involved, and the summary conclusions do not point out the uncertainties, contradictions and ambiguities mentioned in the main text. The authors reach very clear-cut conclusions, insinuating a degree of validity and reliability that is not at all justified by the overview of research evidence. Their recommendations thus do not confuse those politicians and decision makers who only read summaries and who prefer simple and unequivocal conclusions. This makes the book a useful advocacy tool for activists in favour of the traditional paternalistic alcohol control strategies of Northern Europe, and an almost unchallenged pillar of the European alcohol policy discussion.

The central idea of Babor *et al.* is that all countries should adopt the authors' proposals presented as evidence-based alcohol policy. They write:

> With the growth of the knowledge base and the maturation of alcohol science, there is now a real opportunity to invest in evidence-based alcohol policies as an instrument of public health.[11]

The paternalistic/controlling strategies that the authors support are praised as 'cheap and effective', and consist of reducing the number of alcohol outlets as well as shortening their opening hours, greatly increasing taxes on alcohol, and punishing violations severely. All democratic–emancipatory strategy options that are in line with the *Ottawa Charter*, such as primary prevention, health education, health promotion and long-term treatment, are consistently rejected as 'expensive and ineffective.'

Despite the clear policy recommendations from Babor *et al.*, there is no reference to ethical questions. The implicit premise is that whatever measure for reducing alcohol consumption works, particularly if it creates no high extra costs for the government, must be adopted uncompromisingly. Questions such as whether the administration of a democratic society is allowed to paternalise, control and punish the vast majority of alcohol consumers who will never develop alcohol problems for the sake of a minority who will develop alcohol problems – in the words of Lloyd,[12] 'to punish many for the sins of a few' – were not addressed. Nor was there any reflection on the fact that a dramatic

increase in alcohol prices has little impact on wealthy consumers, but dramatically affects the poorer sectors of society. As noted above, there is no mention in the summary that the empirical basis supporting the conclusions is far less conclusive than the reader of the summary might expect. However, the analysis of alcohol-related developments in Austria directly contradicts many conclusions of Babor *et al.*, as Uhl *et al.*[13,14] have quite clearly shown.

The effects of the 'alcopops' tax in Germany and the 'Pilate Fallacy'

Every researcher trained in statistics is aware that association must not be confused with causation, and that most data do not permit causal inference without making more or less plausible additional assumptions. To draw direct conclusions uncritically if the variables are concomitant is known as the 'Cum Hoc Fallacy',[2]* and if they are in successive order it is known as the 'Post Hoc Fallacy.'[2]† The problem for researchers is that they are permanently confronted with situations where their counterparts expect unconditional, simple, unequivocal and seemingly well-confirmed causal interpretations, which they cannot honestly produce. One approach for a scientist in this dilemma is to admit the problems openly, to formulate plausible assumptions explicitly, to argue these assumptions transparently (referring to existing research evidence, logic and plausibility), to interpret the available data based on these assumptions, and to admit ambiguities, uncertainties and other problems in the conclusions.

The other approach is to define the research questions and describe the plain results without interpretation. The researcher under such conditions can sit back and remain totally descriptive, knowing that the desired causal conclusions will be drawn by others without their having to 'get their hands dirty.' Setting up a situation in such a way that others inadvertently commit a fallacy – regardless of whether it is done on purpose or not – was termed a 'booby-trap' situation by Curtis:[2] 'a linguistic snare which is not itself fallacious, but may cause someone to inadvertently commit a fallacy.' If researchers are truly convinced that remaining descriptive is sufficient in a situation whenever they cannot make any sense out of their data, they are committing a serious fallacy themselves. By analogy with the biblical example of Pilate, who washed his hands of guilt after the trial of Christ, the term 'Pilate Fallacy' or 'Stay clean and have others commit the error you implicitly suggested Fallacy' is adequate. Staying strictly descriptive, and anticipating that the reader

* To be precise: 'Cum Hoc Ergo Propter Hoc Fallacy.'
† To be precise: 'Post Hoc Ergo Propter Hoc Fallacy.'

will commit all the logical fallacies necessary to arrive at the very conclusions that the scientist shares, is by no means scientific objectivity. If done unintentionally, it constitutes a form of ignorance, and if done intentionally it is a very subtle form of intent to mislead.

Scientific literature is full of examples of the 'Pilate Fallacy.' A good recent example is the evaluation of the new German 'alcopops'* law. Germany introduced a new specific alcopops tax and immediately after it was imposed, alcopops sales fell dramatically. Parallel with this, an almost identical decrease in alcopops sales occurred in Austria, where no such tax had been imposed. This suggests that the alcopops fashion had vanished independently or almost independently of any new taxes. The aims of the new tax were purely descriptive: 'The law aims at lower alcopops consumption through higher prices.' The German Federal Centre for Health Education[15] was also purely descriptive when reporting the results of an evaluation of its effects:

> Consumption of spirits-based alcopops as well as total alcohol consumption has moved in the intended direction . . . The consumption of spirits-based alcopops by 12- to 17-year-old youths declined significantly from 2004 through 2005 in frequency as well as quantity.

In other words, the authors never said explicitly that there was a causal relationship between the new tax and the reduction in sales, but they never called for caution when interpreting the results either, and there was not the slightest explicit hint that the association might be a mere coincidence. On the basis of this report, the German Ministry of Finance,[16] which had commissioned the study initially, interpreted it unconditionally and explicitly as showing that there was a causal relationship: 'The conclusion is that the introduction of the alcopops tax increased the price of spirits-based alcopops, which caused a considerable reduction in demand.' No one protested.

The conflict between industry and the public health sector and the 'Bifurcation Fallacy'

If parents are afraid that they may have a hard time convincing their small child to go to bed straight away, a popular trick is to ask 'Do you want to brush your teeth first and then put on your pyjamas, or do you want to do it the other way round?' This dupes the child into believing

* Alcopops are pre-mixed alcoholic beverages, usually marketed in small bottles of volume less than 250ml, with an average alcohol content somewhat above that of average beer. Because of their sweetness and trendy design they are criticised for appealing particularly to minors.

that there are only two options available, and also that he or she can freely decide what to do. If the parents are lucky, the child does not realise that the most attractive third option would be to stay up longer. To see only two options if there are actually more than two is termed the 'Bifurcation Fallacy.'[2] A similar strategy is currently being used by the advocates of a strict alcohol and tobacco control policy. They present the issue exclusively as a struggle between a very potent industry and an under-resourced public health sector, sometimes even demanding that research should unconditionally join the side of the public health sector in order to counterbalance some of the inequalities. This bipolar reductionism covers up the fact that there are more than two stakeholders involved in this conflict. Not considered to be partners in this discourse, for example, are consumers who perceive smoking cigarettes and/or drinking alcohol as an inalienable right, or workers involved in the production and trading of these commodities.

'Is cannabis dangerous?' and the 'Bifurcation Fallacy'

A standard question about cannabis is 'Is it harmless or dangerous?' Since this question is always asked in relation to cannabis policy options, the implicit ethical premise is that dangerous objects and activities must be forbidden. The flaw in this question is that a continuous quantitative scale of 'risk of adverse outcomes' is presented as a dichotomy – harmless versus dangerous. Such a dichotomy requires the definition of a precise cut-off point. To present it as a dichotomy is an example of the 'Bifurcation Fallacy' again.

It is a truism that hardly any behaviour is completely without risk. Some people suffocate while trying to drink a glass of water, others break their necks as they fall out of their beds, and many die while driving motor vehicles or climbing mountains. However, no one has ever considered outlawing the drinking of water, sleeping at night or driving motor vehicles, and only a few have demanded the outlawing of mountain climbing. Obviously the implicit simple ethical principle that everything dangerous must be forbidden has no chance of being accepted as a basic principle if it is made explicit and generalised. However, only a few individuals will object if they are confronted with such an implicit principle in areas where they are in favour of a strict control policy anyway. Logic is commonly welcome only if it serves to refute conclusions that one rejects emotionally, but little appreciated if it interferes with conclusions that one accepts emotionally.

Researchers at least should be able to get beyond this kind of subjectivism. Adequate research concerning the dangers associated

with cannabis use or other activities should assess the different dimensions of risk and do so quantitatively. Adequate research should also compare the risk for a variety of different legal and illegal behaviours to compare them, and assess objective and subjective benefits to counterbalance these risks. The simple question 'Is cannabis dangerous?' is a perfect example of the fact that not only answers but also questions can be completely wrong.

Gateway theory and the 'Post Hoc Fallacy' and the 'Loaded Words Fallacy'

The gateway theory, which claims that cannabis consumption is associated with an elevated risk of subsequent heroin use, has been a highly popular argument in cannabis policy discussion for many decades. The theory has hardly ever been specified precisely enough to enable serious conclusions based on it to be drawn. The fact that most heroin users have used cannabis previously is interpreted by some as proving that cannabis consumption causally increases the risk of later heroin consumption – a classical 'Post Hoc Fallacy.'[2]* It is equally inadequate to reject the existence of a causal association between cannabis and heroin consumption by arguing that all heroin users have previously used not only cannabis but also milk, because the cannabis and heroin consumption correlates whereas the milk and heroin consumption does not.

It is very peculiar that supporting the gateway theory is virtually synonymous with rejecting a liberal cannabis policy, and that rejecting the gateway theory is synonymous with supporting such a policy. This is hard to understand logically, as the liberal Dutch cannabis policy is explicitly founded on accepting a gateway theory, explaining the relationship by a social factor. The Dutch policy was introduced in order to separate the cannabis market from the heroin market and so prevent cannabis users from running an elevated risk of coming into contact with heroin. Even if the relationship between cannabis and heroin consumption cannot be explained by social factors but only by individual ones, via an elevated susceptibility to drug use, this would not justify a strict cannabis policy either. If two substances serve a similar function and an intervention makes one of them less available, one would expect that the other substance would become more popular. Economic theory suggests that, if someone is fond of apples and pears, to make one of these fruits unavailable will very likely enhance their consumption of the other. It may well be, for instance, that the higher prevalence of cannabis use in

* The 'Post Hoc Ergo Propter Hoc Fallacy' refers to the assumption that because one thing follows another the one thing was caused by the other.

the USA is a result of making alcohol very difficult for youngsters to obtain.

Overall, the gateway theory is a very good example of two groups trying to get support for their favoured drug policy option by using the term 'gateway theory' primarily because of its connotation – what methodologists call the 'Loaded Words Fallacy'[2]* – even though the denotative content, if analysed logically, suggests exactly the opposite policy.

Alcohol consumption and traffic risk, and the 'Fallacy of Suppressed Evidence'

The most famous project on the relationship between alcohol consumption and traffic risk is the Grand Rapids Study by Borkenstein *et al.*[17] It was a well-designed, large roadside and case–control study, and served as the scientific basis for introducing specific blood alcohol concentration (BAC) limits in many European countries. When the data were analysed, the authors found an unexpected result. The risk of traffic accidents was half as high for drivers with a BAC around 0.02% as it was for drivers who were completely sober. The initial interpretation was that small amounts of alcohol enhance driving capability, and this phenomenon was named the 'Grand Rapids Dip.' When Hurst[18] reanalysed the data according to strata of drivers with similar alcohol consumption, he found that the risk of causing an accident while under the influence of alcohol increased constantly as the BAC levels increased, but he also found that abstainers and near-abstainers were more than four times as dangerous in a sober state as sober daily drinkers. Daily drinkers, according to this analysis, reached the level of risk that sober abstainers only had when they drank up to 0.1% – which is twice the level that a driver is allowed to reach in most European countries nowadays. Edwards *et al.*,[19] who wrote the predecessor to the previously mentioned book, *Alcohol, No Ordinary Commodity*, decided to describe only the first effect, namely that any amount of alcohol increases the risk of traffic accidents, and to withhold any mention of the second effect, namely that abstainers and near-abstainers in a sober state constituted a major traffic risk. In order to conceal the latter fact, they normed the risk level at 0% BAC as 1, and thereby concealed the story that they did not want to communicate – a classical 'Fallacy of Suppressed Evidence', which is hard to justify from a scientific point of view.[13]

* The 'Loaded Words Fallacy' refers to the deliberate use of prejudiced terms.

Economic costs of substance abuse and the 'Naive Fallacy'

Single *et al.*[20] have developed internationally accepted guidelines to enumerate and aggregate the economic costs of problematic substance use. Those costs have been estimated to represent between 2.7% and 5.0% of the gross national product (GNP).[21,22] These incredibly high costs are very popular advocacy tools for justifying substance-related expenditure by police, justice, prevention, therapy, research and any other stakeholders involved. It is therefore understandable that there is little motivation for experts to analyse critically the logic behind these numbers. A systematic analysis makes it quickly evident that the concept is loaded with major logical and conceptual flaws. It is inconsistent in perspective and target criteria, it enumerates sometimes entirely fictitious costs, and it argues in a circular manner. Just a few examples are listed below to illustrate this.

- Since policy costs* and costs directly caused by the problem are aggregated to one sum of economic costs, the strange fact arises that the costs of the problem increase continuously the more we invest in combating it. That way any irrelevant problem, if we fight it determinedly enough, will appear as a very expensive major problem – a highly irrational circular way of arguing.[23]
- Since life years lost are quantified by what an average person would have produced in one year, the economic loss of four abusers dying 20 years early is equivalent to one person not born due to contraception or to one young migrant not allowed to enter the country.[24] What is not considered is that a non-existing person does not produce, but at the same time does not consume either – producing a zero balance for third parties.
- The costs for substance-related treatment are added as a cost factor, but offsetting costs avoided by the problem is not considered. This ignores, for instance, the fact that a person dying prematurely from cirrhosis of the liver cannot possibly die from cancer, and will never need intensive support in old age.[24]
- Since costs are accumulated regardless of whether they are avoidable or not, in line with the logic of these economic cost calculations, the economic loss of not being immortal is infinite.[24]

I could easily continue with more specific details showing that what is presented as the economic cost of substance abuse is based on a 'Naive

* Policy costs are costs for policy measures to reduce the tangible and intangible costs caused by the problem.

Fallacy', the commonly used term for hopelessly inappropriate simplistic miscalculation. If assessed seriously, the substance abuse-related costs that third parties have to bear are only a small proportion of what published figures try to make us believe. Indeed in some instances, such as cigarette smoking, the overall balance may even be in favour of third parties. For instance, smokers usually work, pay taxes and make pension contributions, but on average die much earlier and do not consume their pensions or require social care in old age.[24]

Substance-related death and the 'Naive Fallacy'

It is common practice to estimate the number of people who die annually as a result of alcohol, nicotine, drugs and other problem issues, and the numbers commonly presented are impressively high. Hardly anyone seems to care what the term 'substance-related death' actually means. These figures can be used to convince audiences with details when opening conferences, or as advocacy tools to highlight the importance of certain policy measures. Although 'substance-related' does not mean 'causally related' but simply 'associated', most individuals will instantly interpret the term as causal, and furthermore assume that there is only one cause logically assignable to a specific death. Both of these ideas are flawed and render the concept inconclusive – the product of a 'Naive Fallacy' again.

It is apparent that there are many circumstances and behaviours that have an impact on the duration of a person's life. Some factors increase life expectancy and others decrease it. The relevant factors are innumerable, and most of them interact in a complex manner. To make the problem immediately visible, if someone dies earlier than average due to either taking very little exercise or over-exercising, can we sensibly call them a 'victim of suboptimal exercise'? If, on the other hand, someone lives longer due to taking optimal exercise, can they be classified as a 'beneficiary of optimal exercise'? Exercise or lack of exercise is certainly not the only behaviour that determines a lifespan. If we accept the classifications of 'victim of suboptimal exercise' or 'beneficiary of optimal exercise', how many minutes, hours or days must the effect be maintained for in order to justify such a classification? Even more tricky, imagine that someone, as a result of several adverse social and private circumstances, becomes depressive and is on the verge of committing suicide, but decides to self-medicate with alcohol and therefore survives for two more years until they finally put an end to their life. Can this person, whose death is clearly alcohol related but who lived two years longer due to alcohol use, justly be classified as a 'victim of alcohol', or is it more appropriate to label them a 'beneficiary of alcohol' instead? Does it make sense also to label them a 'victim of adverse social conditions', a

'victim of personal problems', a 'victim of depression', a 'victim of an inappropriate psychiatric system, not taking care of their depression in time' or a victim of numerous other adverse conditions that we could identify in their life? Is this person not also a beneficiary of all the lifetime-enhancing positive conditions in their life? I think it is quite obvious that it makes little sense to enumerate the number of substance-related deaths, and that it is inappropriate to interpret substance-related deaths as causally substance-attributable deaths and to classify every case of death for numerous reasons simultaneously. If we do the latter, we arrive at a total sum of many hundred per cent.

However, it does make sense to try to assess the average number of years lost due to a certain situation, or to assess the number of disability-adjusted or quality-adjusted years of life lost, so long as this is done correctly in methodological terms. It also makes some sense to count the number of victims who die immediately after certain events, such as car accidents, substance overdose, and so on, but it makes no sense to try to quantify the overall number of people who die due to alcohol, nicotine, illicit drugs, etc.[25]

Drug policy discussion and the 'Bifurcation Fallacy'

A common dichotomy in early drug policy discussion was coercive treatment versus imprisonment. Later, the dominant dichotomy was legalisation versus criminalisation, or decriminalisation versus criminalisation. Due to the fact that more and more different policy options have been tried in different countries and that, in addition, a variety of harm reduction measures have become more and more established, the impact of these simple polarities has systematically vanished, at least among experts. In political and media discussions, this simple way of scoring by associating one's own ethical preferences with generally accepted strategies, and contrasting this with a rather extremely formulated alternative that the majority rejects, is still a reality. In the latter form, this line of reasoning resembles the 'Straw Man Fallacy',[2] in which a counterargument is produced to refute a fake argument, thus adding credibility to one's own argument.

Conclusion

Putting the finger on methodological problems and fallacies is commonly not appreciated by researchers whenever the critical remarks directly target their work. On the other hand, many researchers enjoy hearing such 'theoretical things' if they are described comprehensibly, and if this does not impact seriously on their everyday work. Virtually everyone is

fond of critical theory if it helps to challenge the positions of disliked conclusions.

It may be atypical to believe that it makes sense to apply the basic principles of logic and methodology to one's own work and similarly to the work of others. The role of a researcher involves challenging all existing theories destructively, including one's own convictions and pet theories, an approach that is absolutely contrary to the role of an advocate, who tries to assemble evidence systematically in order to prove their point, and who is more interested in effect – if necessary by deceiving people – than in enhancing knowledge.

Researchers should be ready to accept this more difficult task in their daily work, empowered by the conviction that only actively removing logical obstacles can enable us to truly advance, rather than pretending to be moving them to our customers and often to ourselves.

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