

Exercise 5.1 Evaluating sources

(1) According to the Holden car company, the brakes fitted in their new range of cars are the safest in the world.

1. Is the source in a position to know?

Presumably the source is in a position to know and probably has the relevant expertise.

2. Is there any reason to suspect the reliability of the source?

There is a motive to lie (or perhaps exaggerate the truth), since Holden has a lot to gain by claiming that their new brakes are the safest in the world.

3. Is there any corroborating evidence from independent sources?

None is mentioned. Corroboration might come from reports (preferably from independent sources) of studies which have tested various car braking systems.

4. Overall: Should not accept this claim merely on the say-so of Holden.

(2) Professor Jones of Harvard University mentions in his latest book that in 17th century England there were severe penalties for begging.

1. Is the source in a position to know?

This depends on what his field is. If he is a professor of History and has some expertise in English 17th century law, then he has the relevant expertise.

2. Is there any reason to suspect the reliability of the source?

None is mentioned here. We would need to check his past record.

3. Is there any corroborating evidence from independent sources?

None mentioned. Would need to see what other experts say.

4. Overall: We can accept the claim, provided that Prof. Jones has the relevant expertise.

(3) The report released yesterday by the Queensland Department of the Environment states that in the last 5 years the state's land-reclamation program has resulted in a 20% increase in the amount of land available for farming. If these figures are correct, the program has been a great success. Professor Craig, a distinguished mathematician and winner of the Nobel prize for economics maintains however, that the reclamation program could not possibly have been successful. Clearly then the figures cited in the report cannot be accurate.

Conclusion: Queensland's land reclamation program has been successful.

Source	Claim	Position to know	Reliability	Corroboration	Overall
Professor Craig (C)	The program could not possibly have been successful.	Not obviously. Prof. C is a mathematician, not necessarily an expert on land reclamation programs. We need to see why he thinks the program cannot have been a success.	Assuming he has no motive to lie and has no reputation for making incorrect claims.	None.	Very weak. Since Prof. C may not be in a position to know, his reliability is irrelevant.
Queensland dept. of environment (Q)	Report claiming the program has resulted in a 20% increase in the available land.	Yes.	May have some motive to mislead – depends how politically independent the dept. is and who wrote the report.	None.	Moderate.
Overall evaluation	The weight of evidence seems to be in favour of the conclusion, since Prof. C may not have the relevant expertise.				

(4) Gloria's drama teacher claims that her policy is to give each student the opportunity to act in at least one play during the year but, since Gloria, who attended every class, reports that she was not given such an opportunity, the teacher's claim cannot be true.

Conclusion: The teacher does not provides each student with the opportunity to act in at least one play during the year.

Source	Claim	Position to know	Reliability	Corroboration	Overall
Gloria (G)	G was not given the opportunity to perform in a play.	Yes	Not clear what is at stake here. May have some reason to lie, may not.	None	Moderate
Teacher (T)	Provides each student the opportunity to act in at least one play during the year.	Yes	As above – not clear has any motive to lie.	None	Moderate
Overall evaluation	The conclusion is not supported. The testimony of the two witnesses simply cancels out. The weight of evidence does not favour either side. We should not accept the conclusion, nor should we reject it. We should remain neutral until further information comes to light.				

(5) Amos claims that he can hold his breath under water for a full hour. Dr. Treviso, a cardiopulmonary specialist, has stated that humans are physiologically incapable of holding their breath for even half that long; so Amos' claim cannot be true.

Conclusion: Amos cannot hold his breath under water for a full hour.

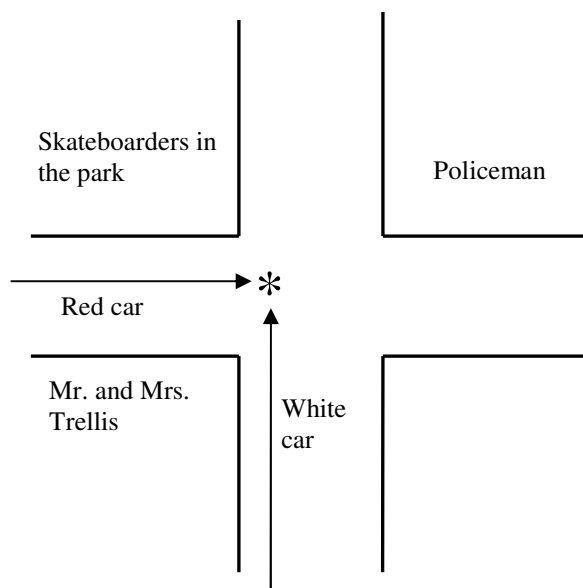
Source	Claim	Position to know	Reliability	Corroboration	Overall
Amos (A)	Claims he can hold his breath for a full hour under water.	Yes.	The claim is on the face of it quite implausible, but we have no other reason to think Amos might not be telling the truth.	None.	Weak.
Dr. Treviso (T)	Humans are physiologically incapable of holding their breath for even half that long	Yes, Dr. T has the relevant expertise.	No reason to suspect reliability.	None.	Strong.
Overall evaluation	The conclusion is supported. Here we have the word of an expert against the word of an individual making a fairly implausible claim. We should go with the expert opinion until we have further evidence about Amos's claim.				

(6) Moira, after observing the finish of the 60-kilometer bicycle race, reports that Lee won with Adams a distant third. Lomas, a bicycle engineering expert, insists, however, that Lee could not have won a race in which Adams competed; so Moira's report cannot be true.

Conclusion: Lee did not win the race.

Source	Claim	Position to know	Reliability	Corroboration	Overall
Moira (M)	Lee won the race.	Observed the end of the race.	No reason to suspect reliability.	None	Moderate.
Lomas (L)	Lee could not have won the race.	Although L is a bicycle expert, that expertise is not obviously relevant in this case.	No reason to suspect reliability.	None	Weak.
Overall evaluation	We should not accept the conclusion. The weight of evidence supports Moira's claim over Ls.				

(7) There is a cross-roads with traffic lights on both roads and there has just been a collision between a red car and a white one (as shown on the diagram below). The driver of the white car accuses the driver of the red car of having jumped the red light; the red car driver denies this. Mr. and Mrs. Trellis were waiting to cross the road on which the white car approached the junction. Mrs. Trellis claims that the red car driver did jump the red light, her husband Mr. Trellis says he didn't. Just before the accident, Mr. Trellis was watching some teenagers skateboarding in a park on the other side of the road on which the red car approached the junction. A policeman was also watching the junction and he says the red car driver did jump the red light.



Conclusion: The red car driver jumped the light, causing the crash.

Source	Claim	Position to know	Reliability	Corroboration	Overall
White car driver (W)	R jumped the red light.	Yes.	Has good motive not to tell the truth.	Corroborated by T1, presumably independent. Also corroborated by P.	Moderately reliable.
Red car driver (R)	R did not jump the light.	Yes.	Also has good motive not to tell the truth.	Corroborated by T2, presumably independent.	Moderately reliable.
Mrs. Trellis (T1)	R jumped the red light.	Yes.	No reason to suspect reliability.	Corroborated by policeman.	Quite strong.
Mr. Trellis (T2)	R did not jump the light.	Yes,.	Was watching skateboarders, so attention was elsewhere.	None.	Fairly weak.
Policeman (P)	R jumped the red light.	Yes, was watching the junction.	No motive not to tell the truth.	None.	Moderately reliable.
Overall evaluation	On balance it looks like the weight of evidence supports the conclusion that the red car driver did jump the light. The testimony of the driver's themselves cancels out. The independent evidence of Mrs. T. supports the conclusion and this is backed up by the policeman. Mr. T's evidence counts against, but is not very strong, since he was distracted.				

(8) One of the employees at Dovetail Joinery has had an accident with a circular saw.

Whilst pushing a large piece of wood through the saw, his hand was seriously injured by the blade. A dispute has now arisen over who was to blame for the accident.

The injured employee, Ashworth (A), claims that he followed all the company's safety procedures but that the owner of the company, Bell (B), had not ensured that the machine was as safe as possible. (B) is adamant that the machine was in a perfectly safe condition. If it had not been, he argues, he would have been told by the foreman (F).

(F) also insists that the machine was always maintained satisfactorily and, to emphasise his point, he has given the written maintenance record to the tribunal. In addition, (F) claims that just before the accident, he saw (A) 'laughing and joking and messing about with his workmates'.

One of these workmates, Chandra (C), agrees with (A) that, despite its regular maintenance, the saw was not as safe as it should have been because its safety guard was poorly designed and did not function well. Furthermore, they had told (F) about it.

A health and safety inspector (I), who has inspected the machine, reports that the safety guard is poorly designed to protect operators in a number of circumstances which are familiar to operators of circular saws.

Conclusion: Ashworth's injury was not his fault, but due to poorly designed safety guard.

Source	Claim	Position to know	Reliability	Corroboration	Overall
Ashworth (A) Injured employee	Followed safety procedures, but B had not ensured machine was safe.	Yes.	May have some reason to lie, if compensation depends on whether it was his fault or not.	C agrees with A's claim. C may not be independent however.	Moderately reliable.
Bell (B) Owner	Machine was perfectly safe.	Perhaps. Claims that if machine was not safe, F would have told him.	Has strong reason not to tell the truth.	Corroboration from Foreman F. Is foreman independent?	Fairly weak.
Chandra (C) Workmate	Machine not safe because safety guard poorly designed.	Yes, assuming has relevant expertise.	No obvious motive to lie, except to support his friend A.	Corroborated by I.	
Chandra (C) Workmate	Told F that safety guard was unsafe.	Yes.	As above.	No corroboration.	Quite weak, Not relevant to the conclusion, but may implicate the foreman.
Foreman (F)	Machine was maintained satisfactorily.	Yes.	May be worried that if he does not agree with B, will lose his job. He may be responsible for safety too, so his job at risk.	Provided written maintenance record. Presumably independent. (but may have been written by him).	Good reason to accept claim, but it is not relevant to the conclusion.
Foreman (F)	Saw A 'laughing and joking and messing around'.	Assuming he was actually there.	See above.	None	Fairly weak.
Health and safety inspector (I)	Safety guard is poorly designed.	Yes, assuming relevant expertise.	Presumably an independent inspector, so no obvious motive to lie.	None	
Overall evaluation	On balance, it seems like we have good reason to accept the claim that the accident was not Ashworth's fault, but due to a badly designed machine. That does not necessarily mean that B is to blame though – he may not have known there was a design flaw in the machine. Only weak reason to think foreman is partly responsible based on C's claim that they told F about the problem.				

Model answer given in Fisher's textbook.

Here is a possible answer -based on particular assumptions. The owner of the company (B) probably has much to lose (he may have to pay compensation or suffer in other ways) if he is held to be responsible for A's injury, so this reduces the credibility of his testimony. For the same reasons, the foreman's (F) credibility is threatened -however he is able to produce a maintenance schedule which corroborates his claim that the machine was always maintained satisfactorily, so this point seems well proven.

(A) has much to lose (or gain) so the credibility of his claim that he followed all the safety procedures is not high, because of his vested interest. (C) is a workmate of (A), so his credibility is reduced since he is probably biased in favour of his workmate.

We assume that the health and safety inspector (I) does not know any of those involved, or at least has no relationships with them which would bias him for or against anyone (otherwise he should not be giving his professional judgement). Thus he is independent and has no vested interest in arriving at one judgement rather than another. We also assume he has the relevant training and expertise to judge this issue (otherwise why is he involved?). Furthermore, he must be able to justify his judgement professionally so his reputation is at risk too. On these assumptions, (I) is a highly credible witness and his judgement suggests that the company which designed the saw and its guard is ultimately responsible for the accident.

Interestingly (C) claims to have told (F) that the saw guard 'was poorly designed and did not function well'. If (C) had the relevant expertise (was familiar with the problems of operating circular saws) and if (F) knew this, it would suggest that (F) failed to act on reliable advice and that would make (F) to blame.

(9) As the warden of Larkfield Park, you have been called to investigate an incident involving a fight between two dogs. The fight took place in the park fifteen minutes ago.

The owner of the first dog (A) claims that the second dog attacked hers, 'viciously and without warning'. The owner of the second dog (B) denies this, pointing to the injuries on her dog as evidence that it was (A)'s dog which attacked viciously. (You can see that (B)'s dog is indeed more injured than (A)'s.)

The owner of a third dog (C) says that, about half an hour ago, her dog had been involved in a fight with (B)'s dog, a fight that was started, without any provocation, by (B)'s dog. In addition, she insists on making the point that (A)'s dog 'always gets on well with hers'.

A jogger (J) tells you that, from a distance, he had seen both incidents in which (B)'s dog is alleged to have been involved. In both cases, he says, (B)'s dog did seem to be the one that was chasing the other and making the most noise.

Another dog owner (D), who has just come into the park, says that he has often walked with (A) and her dog; he finds it impossible to believe that (A)'s dog could be vicious.

Conclusion: B's dog (2) attacked A's dog (1).

Source	Claim	Position to know	Reliability	Corroboration	Overall
Owner of dog 1 (A)	B's dog attacked her dog.	Yes.	If her dog attacked first then has a reason to lie.	Some corroboration from C, J and D.	Moderate.
Owner of dog 2 (B)	A's dog attacked her dog.	Yes	Would have a reason to lie if her dog was to blame.	Weak corroboration from injuries to her dog, but this not really relevant to question of	Moderate.

				which dog attacked first.	
Owner of dog 3 (C)	B's dog attacked her dog half an hour earlier.	Yes	No obvious reason to lie.	None	Moderate.
Dog owner (C)	A's dog always gets on well with her dog.	Yes	No obvious reason to lie.	None.	
Jogger (J)	Saw B's dog attack A's and C's dog.	Depends how far away he was and whether he could accurately identify the dogs.	No obvious reason to lie.	None	
Dog owner (D)	Often walked with A and does not think dog 1 could attack another dog.	Yes	Since As friend, evidence may be biased.	None	
Overall evaluation	Although some of the evidence (from C and D) is quite weak, the balance of evidence is clearly in support of the conclusion.				

(10) The appointment of a new ambassador from a South American country provoked considerable controversy because the ambassador had been accused by many human rights groups of having been personally involved in the torture of political opponents some years before. A demonstration against his appointment had been organised by the anti-Fascist Alliance (AFA). However, this had provoked the group Rebirth-1933 (known otherwise as R33) to organise a counter-demonstration, welcoming the ambassador as 'a fighter against moral decline'.

The police had decided to let both demonstrations go ahead, but provided a very heavy presence in order to keep the two sides apart. Unfortunately, the number of demonstrators on both sides was greater than had been expected, and it became difficult to prevent violence breaking out. One of those hurt was the leader of the AFA, Fran Lee (F), who suffered serious head injuries, and had to be taken to the nearest hospital, where she remains in a coma.

The situation surrounding (F)'s injuries remains unclear. At the time that she was injured, she was being restrained by a policeman, (P) who claims she was hit by a 'rock' which also struck his helmet and which was thrown from a group of R33 demonstrators. Furthermore, (P) insists that he was one of a group of police who were trying to ensure that she did not get attacked by some R33 members who had got very close to her.

On the other hand, a well-known lawyer and human-rights activist (A), who was with her at the time, claims that (F) was injured by the police, especially (P), using their batons with unreasonable force against her and other AFA members. A TV news crew (N), whose camera was damaged in the melee, said that they had filmed several police using their batons heavily on (F) and other AFA members just before she was grabbed by (P). Though R33 leaders deny that she was hit by

something thrown by one of their supporters, an R33 member (M), who refused to be identified, boasted in an interview to the BBC of having ‘split Lee’s head with a brick’. Another witness, a Dutch tourist (D), who had taken shelter from the violence in a doorway, says she certainly saw police using their batons strongly to try to separate people, but she did not see any missiles being thrown. A hospital spokesperson (H) said, ‘Frances Lee sustained a fractured skull which appears to have been caused by at least one very severe blow to the head.’

Conclusion: Fran Lee (F) was injured by being struck by the police, rather than a rock thrown by a member of R33.

Source	Claim	Position to know	Reliability	Corroboration	Overall
Policeman (P)	F was hit by a rock thrown by a member of R33.	Yes.	Has a strong reason not to tell the truth.	Corroborated by M.	Moderate.
Policeman (P)	Was trying to protect F.	Yes.	Has a strong reason not to tell the truth.	None.	Not relevant.
Activist (A)	F was beaten by the police	Yes, was with F at the time.	Perhaps biased against the police? may be a friend of F,	Corroborated by N and D.	Quite strong.
TV news crew (N)	Filmed police using batons on F.	Yes.	No reason to suspect bias.	Could check the film itself, but this has not been done. Only potential corroboration here.	Moderate/
R33 member (M)	Threw rock and hit F.	Yes	Refuses to be identified. Has some reason to lie.	None. Leaders say otherwise, but they have motive to lie too.	Weak.
Dutch tourist (D)	Saw police using batons (but did not see them hit F). Did not see any missiles thrown.	Yes.	May have been scared?	None	Moderate,.
Hospital spokesperson (H)	F had a fractured skull caused by blow to the head.	Yes.	No reason to lie.	None provided.	This evidence not relevant because it does not distinguish between the two possible causes of the head injury.
Overall evaluation	The weight of evidence supports the conclusion. The conclusion is backed up by A (who may not be entirely independent), N (who are) and (though the support here is weak) by D. The evidence against comes just from the policeman and the R33 member, who are both quite unreliable in this case.				

Fisher's model answer

12. I assume from the context that this is set in London. The policeman (P) probably has much to lose if he is found to have harmed Fran Lee (F) with a baton blow, so this greatly reduces his credibility. The 'well-known lawyer and human rights activist' (A) was probably sympathetic to the AFA but we do not know his views about the police, so it is hard to estimate if there was any bias regarding them. He will obviously know the law and how it works and his professional reputation is at risk if he says something which turns out to be false, so this lends credibility to his testimony. I shall assume the TV news crew were from a reputable news company (BBC or ITV say) and this lends credibility to their evidence. Furthermore, if there is any possibility of rescuing some of their film, this could provide evidence concerning the accuracy of what they say, so this puts their reputation at risk, which again increases their credibility.

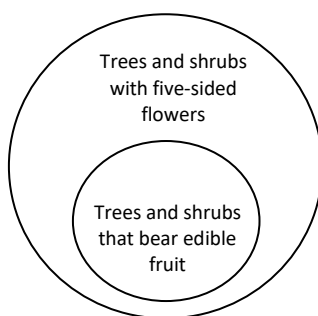
No doubt the R33 leaders would deny blame because they have much to lose if they are found to be partly to blame. Equally the R33 member who boasts that he threw the brick refuses to be identified and therefore is not very credible. I shall assume the Dutch tourist could see much of what was happening; presumably she has no vested interest or bias and was merely an impartial observer so all that lends credibility to her testimony.

No doubt the hospital spokesperson is independent and speaks with the relevant expertise behind her, but her testimony does not help us decide who struck 'at least one severe blow' to Fran Lee's head. On balance and given the assumptions I have made, several credible witnesses, (F), (N) and (D) corroborate one another and their evidence suggests fairly strongly that (P) - and perhaps other police - were responsible for the head injuries to Fran Lee.

Exercise 5.2 Generalisations and counter-examples

- 1 All trees and shrubs that bear edible fruit have five-sided flowers.

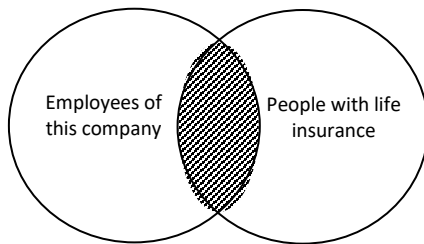
This is a universal generalisation.



A counter-example would be a tree or a shrub bearing edible fruit that did not have five-sided flowers.

2 No employee of this company has life insurance

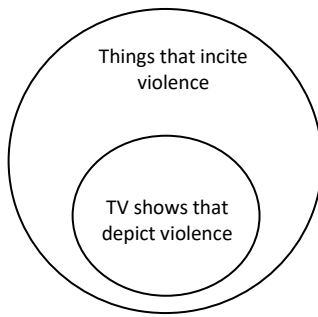
This is a generalisation



A counter-example would be an employee of this company who did have life insurance.

3 Any television show that depicts violence incites violence.

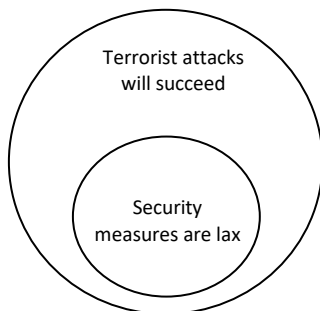
This is a universal generalisation



A counter-example would be a TV show that depicted violence but did not incite it.

4 Terrorist attacks succeed whenever security measures are lax.

This could be interpreted as a universal generalisation



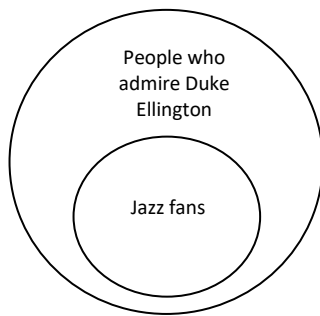
However, the claim would be more likely to be intended as a statistical generalisation (Despite the word 'whenever') to the effect that lax security measures make terrorist attacks more likely to succeed.

5 Not all guilt feelings are psychological aberrations.

This is not a universal generalisation. It does not make a claim about all guilt feelings, only some of them. It says that some are not psychological aberrations.

6 Every jazz fan admires Duke Ellington.

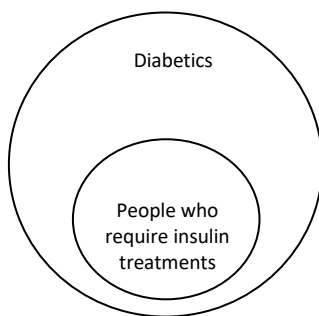
This is a universal generalisation.



A counter-example would be a jazz fan who does not admire Duke Ellington.

7 Only diabetics require insulin treatments.

This is a universal generalisation



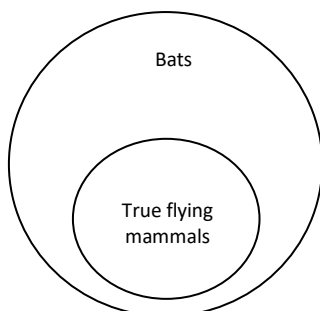
A counter-example would be some who did require insulin treatments but was not a diabetic. Note that the claim is NOT that all diabetics require insulin treatments. That might be true (and it might not be) but it is not what the generalisation says. It says that the only people who need insulin treatments are diabetics, implying that if you are not diabetic, you do not need them.

8 The electroscope is a device for detecting static electricity.

This is not a universal generalisation since it does not make a claim about all the things in a particular category.

9 Bats are the only true flying mammals.

This is a universal generalisation



A counter-example would be a 'true' flying mammal that was not a bat. Note that the word 'true'

here might be intended to rule out glider monkeys and such can glide for a short time but do not fly.

What if someone discovered a new species of bat that could not fly? That would be a counter-example to the generalisation:

All bats are flying mammals

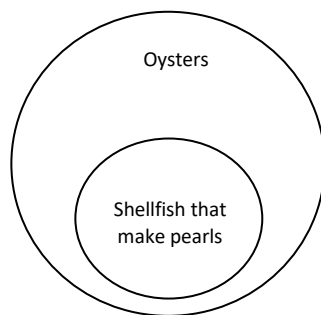
It is not obvious however that 9 above is intended to also imply this universal generalisation also. As stated it does seem to allow for the possibility that *not* all bats are flying mammals.

10 Monkeys are found in the jungles of Guatemala.

This is not a universal generalisation.

11 No shellfish except oysters make pearls

This is a universal generalisation.



A counter-example would be a shellfish that made pearls but which was *not* an oyster.

12 The gap between rich and poor in Australia is now wider than ever.

This is not a universal generalisation. It is a kind of complex statistical generalisation however. It means something like:

The difference in the average income between rich and poor in Australia is larger than it has been in the past.

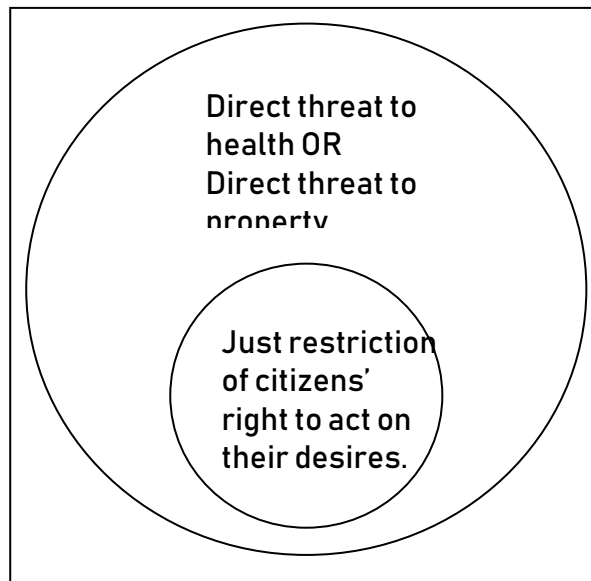
Exercise 6.3 Evaluating generalisations

1. A just government never restricts the right of its citizens to act upon their desires except when their acting upon their desires is a direct threat to the health or property of other of its citizens.

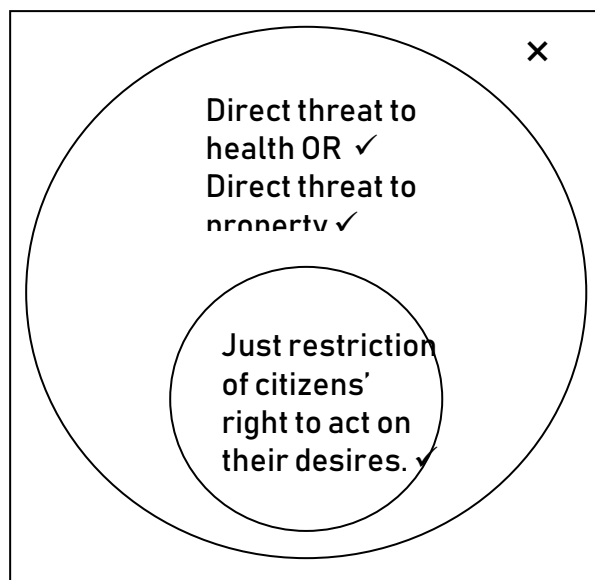
Here is another way of stating the generalisation:

All just restrictions on the rights of citizens to act upon their desires are restrictions on actions that poses a direct threat to the health or property of other citizens.

And here is a diagram representing the generalisation:

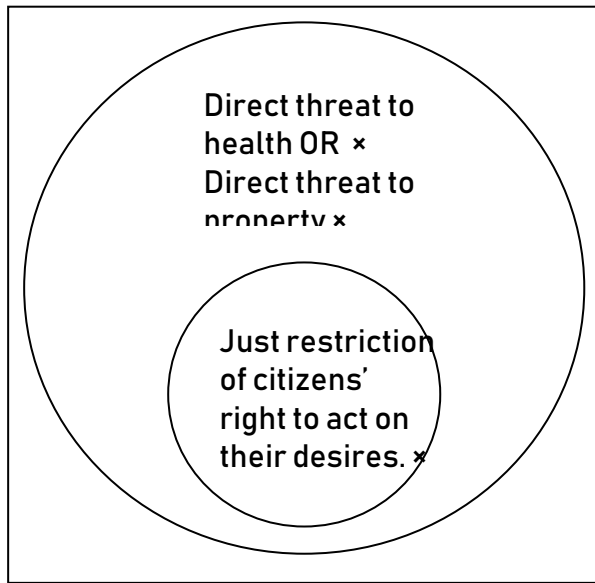


(A) A just government would not ban the sale of sports cars, but it could prohibit unrestricted racing of them on public highways.



This conforms to the principle: There are two parts to A. The first claim is that a just government would not ban the sales of sports cars. That follows because the sale of sports cars does not pose a direct threat to health or property. Hence this case is outside the larger circle and so, according to the principle, would not be a just restriction. The second claim is that a just government could prohibit unrestricted racing of them on public highways. According to the principle, if such a restriction is just it would have to be a direct threat to health or property. And clearly, racing sports cars on public highways would be both. So this claim also follows from the principle.

(B) A just government would provide emergency funds to survivors of unavoidable accidents but not to survivors of avoidable ones.



Does not conform to the principle: This case is not a restriction on the rights of any citizen, so does not fall inside the smaller circle. Nor does it fall inside the larger circle.

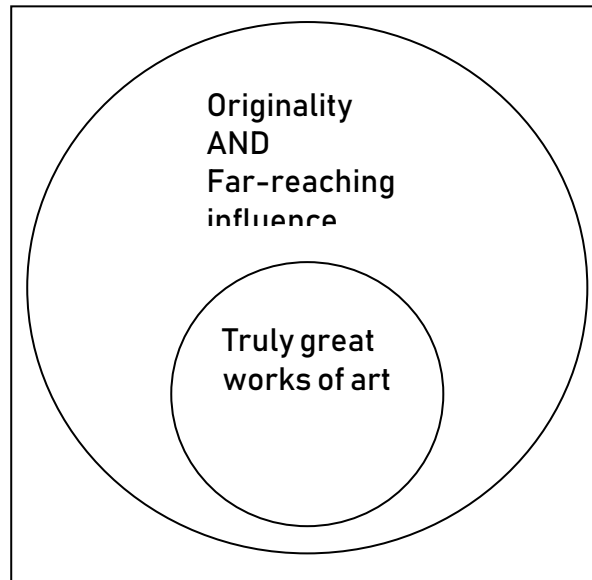
(C) A just government would not censor writings of Shakespeare, but it could censor magazines and movies that criticize the government.



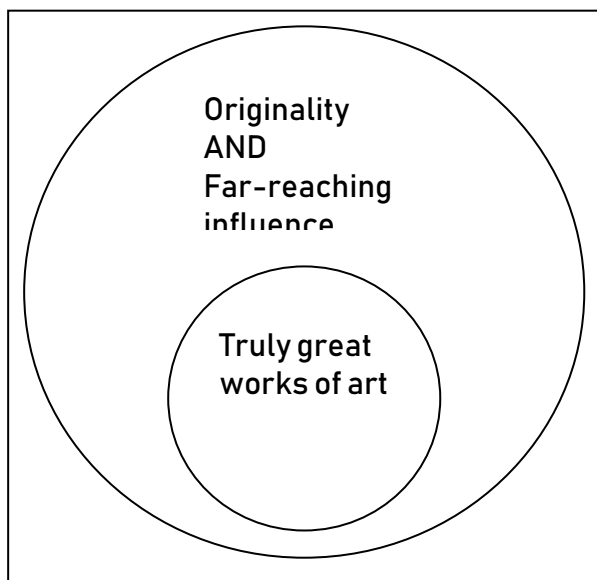
Counter-example: If this was true, then there would be a just restriction on peoples' right to act on their desires that was neither a direct threat to health nor a direct threat to property.

2. To classify a work of art as truly great, it is necessary that the work have both originality and far-reaching influence upon the artistic community.

All truly great works of art have both originality and far-reaching influence.

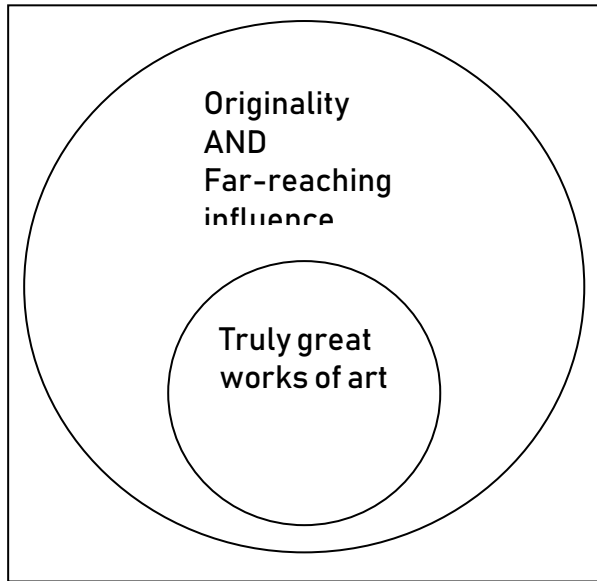


(A) By breaking down traditional schemes of representation, Picasso redefined painting. It is this extreme originality that warrants his work being considered truly great.



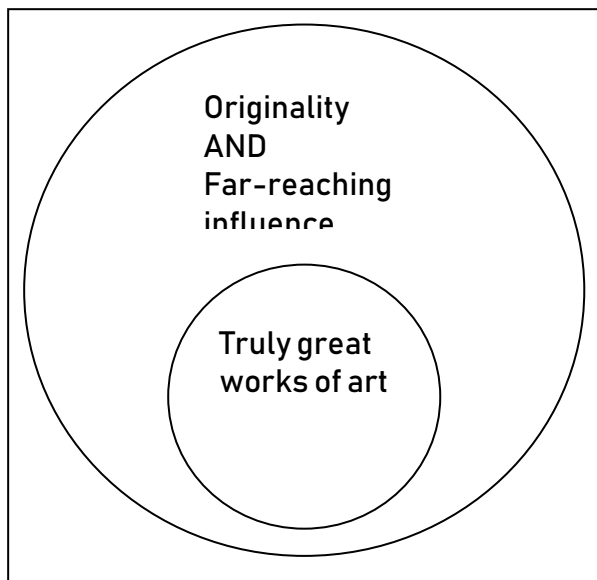
The conclusion does not follow from the stated principle: Here it is claimed that since Picasso's work is original and far reaching it is great. But the principle only states that originality and influence are necessary, not sufficient being great. The stated principle is consistent with their being further conditions, apart from originality and influence which are jointly sufficient for the work to be great.

(B) Some of the most original art being produced today is found in isolated communities, but because of this isolation these works have only minor influence, and hence cannot be considered truly great.



Conforms to the principle: Any work that does not have far reaching influence falls outside the large circle. (it is not original AND influential). So according to the principle such work would not be truly great. So the reasoning here conforms to the principle.

(C) Certain examples of the drumming practiced in parts of Africa's west coast employ a musical vocabulary that resists representation in Western notational schemes. This tremendous originality coupled with the profound impact these pieces are having on musicians everywhere, is enough to consider these works to be truly great.



Does not conform: Again, originality and influence are necessary but not sufficient, according to the principle.

3. The relevant part of the argument is as follows:

1. It is impossible for consumers to consciously restrict their purchases to environmentally benign products.

Therefore:

C. There can be no moral duty not to choose products that directly or indirectly harm the environment.

The question asks, which one of the following generalisations allows the conclusion to be validly inferred from the premise.

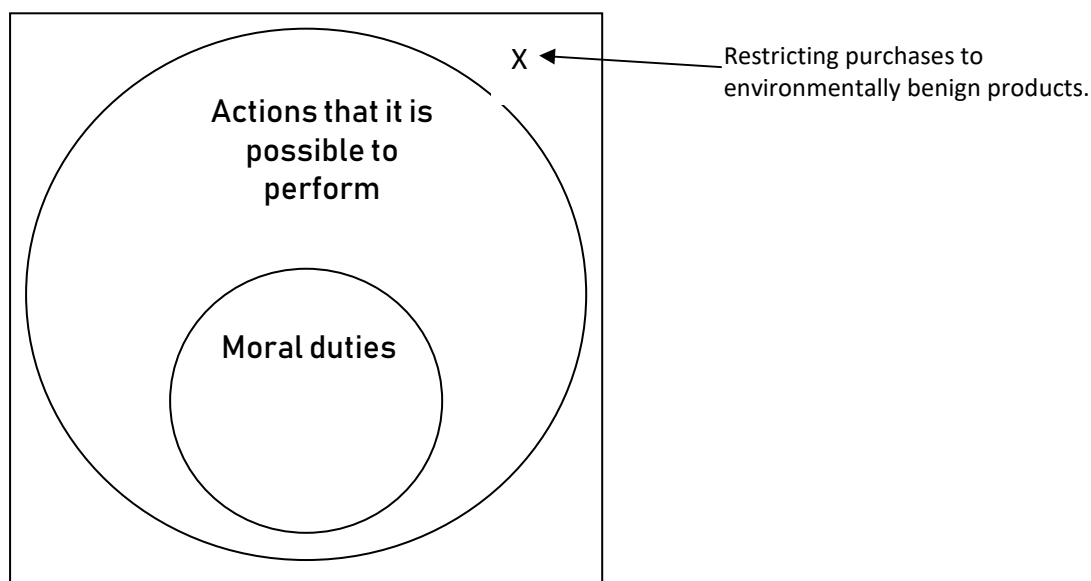
(A) a moral duty to perform an action is never based solely on the effects the action will have on other people.

This principle does *not* allow the conclusion to be validly drawn from the premise. It implies that IF the reason not to choose products that directly or indirectly harm the environment was based solely on the effects this would have on other people, then there would be no moral duty to do so. But the premise of the argument does not say anything about the reasons only having to do with the effects on other people. So this is not the right answer.

(B) a person cannot have a moral duty to do what he or she is unable to do

This is the right answer. If the premise of the argument is true, then consumers are unable to not choose products that directly or indirectly harm the environment (the premise is that this is impossible). But the generalisation in (B) says that if someone is unable to do something, they cannot have a moral duty to do it. It would follow that consumers cannot have a moral duty not to choose products that directly or indirectly harm the environment, which is exactly what the conclusion says.

Here is one way to represent the principle in (B). You can see that if a point is outside the large circle (an action that it is *not* possible to perform) then it is outside the small circle (and so *not* a moral duty). The premise of the argument tells us that not choosing products that directly or indirectly harm the environment is not an action that it is possible to perform. If so, then it cannot be a moral duty.



(A) the morally right action is always the one whose effects produce the least total harm.

This principle does not allow the conclusion to be validly inferred from the premise. It could only do that if the premise stated that restricting purchases to environmentally benign products did NOT produce the least total harm. But that is not what the premise says – it says that restricting purchases in that way is *impossible*.

