*Material*

*Study 1*

*NO.1 Fish kidney task*

A committee found a fish disease in a nearby lake. About 12 fish species (among them the most popular dining fish) have the Proliferative Kidney Disease (PKD). This is a chronically developing infectious disease which can have deadly consequences for the fish. Young fish are especially susceptible, while others seem to be immune against an infection. Experts suggest that PKD is one cause of declining fish catches. The researchers assume human activities and water pollution foster the spread of the disease. They are considering releasing more fish into the lake to control the epidemic. Imagine that you are a government official of the adjacent village. Which of the following options would you favor? Assume that the estimates are as follows：

*NO. 1 鱼类肾脏传染病*

某组织在附近的湖里发现鱼类传染病。约有12种鱼类（其中大多是餐桌上最常食用的鱼）感染了增生性肾脏疾病（PKD）。这是一种慢性传染病，会对鱼类造成致命的后果，其中，幼鱼尤其容易受到感染。然而，有一些鱼类似乎对此疾病免疫。专家们认为，PKD可能导致了当地鱼类捕捞量下降，并且，相关研究人员认为人类活动和水污染加剧了该疾病的传播。因此，研究人员建议当地政府通过向湖中投放更多的鱼来控制疫情。

请想象您是当地的政府官员，您最支持以下哪种投放方案？

Type 1 (Classic):

Option A: If the release of fish is implemented, 4 fish species will survive.

Option B: If the release of fish is implemented, there is 1/3 probability that all of the 12 fish species will survive, and 2/3 probability that none of them will survive.

Option C: If the release of fish is implemented, 8 fish species will die.

Option D: If the release of fish is implemented, there is 2/3 probability that all of the 12 fish species will die, there is 1/3 probability that none of the 12 fish species will die

Type1(经典):

A：如果实施投放，有4种鱼类将存活。

B：如果实施投放，有1/3的可能性所有鱼类（12种）都将存活，有2/3的可能性所有鱼类都不会存活。

○C 如果实施投放，有8种鱼类确定会死亡。

○D 如果实施投放，有2/3的可能性所有鱼类（12种）都会死亡，1/3的可能性所有鱼类都不会死亡。

Type2:

Option A: If the release of fish is implemented, 4 fish species will survive.

Option B: If the release of fish is implemented, there is 1/3 probability that all of the 12 fish species will survive.

Option C: If the release of fish is implemented, 8 fish species will die.

Option D: If the release of fish is implemented, there is 2/3 probability that all of the 12 fish species will die.

Type2:

○A. 如果实施投放，有4种鱼类确定会存活。

○B. 如果实施投放，有1/3的可能性所有鱼类（12种）都会存活。

C：如果实施投放，有8种鱼类确定会死亡。

D：如果实施投放，有2/3的可能性所有鱼类（12种）都将死亡。

Type3:

Option A: If the release of fish is implemented, 4 fish species will survive.

Option B: If the release of fish is implemented, there is 2/3 probability that none of the 12 fish species will survive.

Option C: If the release of fish is implemented, 8 fish species will die.

Option D: If the release of fish is implemented, there is 1/3 probability that none of the 12 fish species will die.

Type3:

○A. 如果实施投放，有4种鱼类确定会存活。

○B. 如果实施投放，有2/3的可能性所有鱼类（12种）都不会存活。

C：如果实施投放，有8种鱼类确定会死亡。

D：如果实施投放，有1/3的可能性所有鱼类（12种）都不会死亡。

*NO.2 Drinking water contamination*

Imagine a refinery that processes petroleum products. An investigation found that due to tank leaks, both soil and drinking water became contaminated. Due to this contamination 720 children from the adjacent village have a fatal disease. There is agreement among experts that children will not suffer health problems, provided they have a strong immune system. Otherwise, it is likely that children will have serious health problems. A vaccine against this disease has been developed and tested. However, the vaccine sometimes can cause side effects that can be fatal too. You are an environmental activist with much influence on the local hospital and you have to decide if you want to lobby for the vaccination or not. Which of the options would you favor? Assume that the estimates are as follows:

*NO.2 饮用水污染*

有一项调查发现，一家炼油厂由于水槽泄漏，对周边土壤和饮用水造成污染，因此，邻近村庄的720名儿童患上了一种严重的疾病。专家们一致认为，如果儿童有强大的免疫系统，不会出现健康问题，否则，可能面临严重的健康问题。目前，针对这种疾病的疫苗已被测试开发，然而，这种疫苗有时也可能会造成致命的副作用。

请想象，您是一名对当地医院极具影响力的环保主义者，您需要决定是否要对此类疫苗的接种进行游说，您最支持以下哪种疫苗？

Type 1 (Classic):

Option A: If the vaccination is adopted, the health of 240 children will be saved for sure.

Option B: If the vaccination is adopted, there is a one-third probability that the health of all of the 720 children will be saved, and a two-thirds probability that the health of none of them will be saved.

Option C: If the vaccination is adopted, the health of 480 children will be damaged for sure.

Option D: If the vaccination is adopted, there is a one-third probability that the health of none of the 720 children will be damaged, and a two-thirds probability that the health of all of them will be damaged.

Type1:

A：如果接种疫苗，有240名儿童的健康确定会被挽救。

B：如果接种疫苗，有1/3的可能性所有儿童（720名）的健康都将被挽救，2/3的可能性所有儿童的健康都不会被挽救。

○A. 如果接种疫苗，有480名儿童的健康确定会遭受损害。

○B. 如果接种疫苗，有2/3的可能性所有儿童（720名）的健康都会遭受损害，1/3的可能性所有儿童的健康都不会遭受损害。

Type 2:

Option A: If the vaccination is adopted, the health of 240 children will be saved for sure.

Option B: If the vaccination is adopted, there is a one-third probability that the health of all of the 720 children will be saved.

Option C: If the vaccination is adopted, the health of 480 children will be damaged for sure.

Option D: If the vaccination is adopted, there is a two-thirds probability that the health of all of the 720 children will be damaged.

Type 2:

○A. 如果接种疫苗，有240名儿童的健康确定会被挽救。

○B. 如果接种疫苗，有1/3的可能性所有儿童（720名）的健康都会被挽救。

C：如果接种疫苗，有480名儿童的健康确定会遭受损害。

D：如果接种疫苗，有2/3的可能性所有儿童（720名）的健康都会遭受损害。

Type 3:

Option A: If the vaccination is adopted, the health of 240 children will be saved for sure.

Option B: If the vaccination is adopted, there is a two-thirds probability that the health of none of the 720 children will be saved.

Option C: If the vaccination is adopted, the health of 480 children will be damaged for sure.

Option D: If the vaccination is adopted, there is a one-third probability that the health of none of the 720 children will be damaged.

Type 3:

○A. 如果接种疫苗，有240名儿童的健康确定会被挽救。

○B. 如果接种疫苗，有2/3的可能性所有儿童（720名）的健康都不会被挽救。

C：如果接种疫苗，有480名儿童的健康肯定会遭受损害。

D：如果接种疫苗，有1/3的可能性所有儿童（720名）的健康都不会遭受损害。

*NO.3 Genetically engineered crops.*

Some years ago, in the village where you live, the farmers adopted eight new genetically engineered crops to save costs. According to the experts, there are concerns that the population of 9 species of beneficial insects have already decreased dramatically and could even become extinct. One of the reasons may be that the insects eat pollen from genetically modified corn. The local government is considering enacting a law that should limit the use of genetically engineered crops from eight to two. As an influential member of the government, you can lobby for this law or not. Assume that the exact scientific estimates of the consequences are as follows:

*NO.3 转基因作物问题*

几年前，在您所居住的村庄，村民为了节约生产成本而引进了八种转基因作物。专家指出，有九种有益昆虫数量因此大幅减少，甚至濒临灭绝。当地政府正在考虑制定一项法律将转基因作物的使用范围从八种减少到两种。

请想象您是当地一名有影响力的政府官员，可以为法律的颁布进行游说。假设法律的颁布后果的准确科学评估如下，您最支持一下哪种法律？

Type 1 (Classic):

Option A: If the law is enacted, 3 insect species will be saved.

Option B: If you the law is enacted, there is a one-third probability that all of the nine insect species will be saved, and a two-thirds probability that none of them will be saved.

Option C: If the law is enacted, 6 insect species will become extinct.

Option D: If the law is enacted, there is a one-third probability that none of the 9 insect species will become extinct, and a two-thirds probability that all of them will become extinct.

Type 1：

○A. 如果颁布该法律，有3种昆虫确定会被拯救。

○B. 如果颁布该法律，有1/3的可能性所有昆虫（9种）都会被拯救，2/3的可能性所有昆虫都不会被拯救。

C：如果颁布该法律，有6种昆虫将确定会灭绝。

D：如果颁布该法律，有2/3的可能性所有昆虫（9种）都会灭绝，1/3的可能性所有昆虫都不会灭绝。

Type 2:

Option A: If the law is enacted, 3 insect species will be saved.

Option B: If you the law is enacted, there is a one-third probability that all of the nine insect species will be saved.

Option C: If the law is enacted, 6 insect species will become extinct.

Option D: If the law is enacted, there is a two-thirds probability that all of the 9 insect species will become extinct.

Type 2：

○A. 如果颁布该法律，有3种昆虫确定会被拯救。

○B. 如果颁布该法律，有1/3的可能性所有昆虫（9种）都会被拯救。

C：如果颁布该法律，有6种昆虫将确定会灭绝。

D：如果颁布该法律，有2/3的可能性所有昆虫（9种）都会灭绝。

Type 3:

Option A: If the law is enacted, 3 insect species will be saved.

Option B: If you the law is enacted, there is a two-thirds probability that none of the 9 insect species will be saved.

Option C: If the law is enacted, 6 insect species will become extinct.

Option D: If the law is enacted, there is a one-third probability that none of the 9 insect species will become extinct.

Type 3：

○A. 如果颁布该法律，有3种昆虫确定会被拯救。

○B. 如果颁布该法律，有2/3的可能性所有昆虫（9种）都不会被拯救。

C：如果颁布该法律，有6种昆虫将确定会灭绝。

D：如果颁布该法律，有1/3的可能性所有昆虫（9种）都不会灭绝。

*NO.4 Endangered forest*

An investigation revealed that 600 trees of an old-growth forest (some of these trees are over 500 years old) are endangered. Due to acid rain, the trees have become very susceptible to a specific kind of pest which threatens the trees. The experts agree that some of the trees are strong enough to survive, while others will have to be cut down. You are the head of the forest management office, and it is in your power to decide if a treatment aimed at reducing the pest and to save the trees should be implemented or not. Which option would you favor? Assume that the characteristics of the options are as follows:

*NO. 4 濒危森林问题*

一项调查显示，有600棵古老的树木（其中一些树龄已超过500年）濒临灭绝。由于酸雨的危害，这些树木极易受到一种害虫的威胁。专家们一致认为，必须砍伐一定量的树木以降低危害。

请想象您是森林管理办公室的负责人，您有权决定是否应该实施一种旨在减少虫害，拯救树木的方案。假设这些方案的介绍如下，您最支持以下哪种治疗方案？

Type 1 (Classic):

Option A: If you support the treatment, 200 trees will be saved.

Option B: If the treatment is adopted, there is a one-third probability that all the trees will be saved, and a two-thirds probability that none of them will be saved.

Option C: If you support the treatment, 400 trees will die.

Option D: If the treatment is adopted, there is a one-third probability that none of the trees will die, and a two-thirds probability that all of them will die.

Type 1:

○A. 如果你采用此方案，有200棵树木确定会被拯救。

○B. 如果你采用此方案，有1/3的可能性所有树木（600棵）都会被拯救，2/3可能性所有树木都不会被拯救。

C：如果你采用此方案，有400棵树木将确定会死亡。

D：如果你采用此方案，有2/3的可能性所有树木（600棵）死亡，1/3的可能性所有树木都不会死亡。

Type 2:

Option A: If you support the treatment, 200 trees will be saved.

Option B: If the treatment is adopted, there is a one-third probability that all the trees will be saved.

Option C: If you support the treatment, 400 trees will die.

Option D: If the treatment is adopted, there is a two-thirds probability that all of the trees will die.

Type 2:

○A. 如果你采用此方案，有200棵树木确定会被拯救。

○B. 如果你采用此方案，有1/3的可能性所有树木（600棵）都会被拯救。

C：如果你采用此方案，有400棵树木将确定会死亡。

D：如果你采用此方案，有2/3的可能性所有树木（600棵）都会死亡。

Type 3:

Option A: If you support the treatment, 200 trees will be saved.

Option B: If the treatment is adopted, there is a two-thirds probability that none of the trees will be saved.

Option C: If you support the treatment, 400 trees will die.

Option D: If the treatment is adopted, there is a one-third probability that none of the trees will die.

Type 3:

○A. 如果你采用此方案，有200棵树木确定会被拯救。

○B. 如果你采用此方案，有2/3可能性所有树木（600棵）都不会被拯救。

C：如果你采用此方案，有400棵树木将确定会死亡。

D：如果你采用此方案，有1/3的可能性所有树木（600棵）都不会死亡。