Act Utilitarianism

Inputs: Utility/measure of happiness

How to calculate: For each option, sum up each user's happiness with it, and the option with the highest happiness is the best output.

Eg. best outcome = arg max(total happiness for preference 1, total happiness for preference 2, … preference n)

Scenario: Deciding the Best Preference. 当用户都有自己的偏好选择时，通过计算最高的幸福值得到最佳选项。例如，用户1对选项A的幸福值为7，对选项B的幸福值为4；用户2对A和B分别为

Prioritarianism/Maximin

Inputs: Utility/measure of happiness

How to calculate: Compare the lowest user happiness among each option, and the option with the highest value among these lowest happiness is the best output.

Eg. best outcome =arg max(min(each user happiness for preference 1), min(…preference 2),…min(preference n))

Envy-Freeness ?

Resource allocation ensures that no one has envy.

Eg. Allocate chocolate pieces

Doctrine of Double Effect ?

The Doctrine of Double Effect typically includes four conditions that must be met for an action to be morally permissible:

1. The action must be morally good or at least morally neutral in itself.
2. The bad effect must not be intended, but only foreseen or anticipated.
3. The good effect must be intended.
4. The good effect must outweigh the bad effect

Eg. The doctor injected a pain reliever into a patient with advanced cancer.

Doctrine of Disparate Impact ?

The results, which appear neutral on the surface, actually have a disproportionately negative impact.

Do No Harm ?

This principle reflects the idea that preventing harm to others is often more important than achieving positive results. This principle reflects the idea that preventing harm to others is often more important than achieving positive results.

Libertarian Proportionalism

Inputs: Contribution

How to calculate: The option with the highest contribution ratio is the best output.

Eg. best outcome = arg max(each user’s contribution to each preference)

Desert-Based Proportionalism

Inputs: Contribution/Luck

How to calculate: The option with more contribution and less luck will be the best output.

Eg. best outcome = arg max(contribution-luck)

Luck Egalitarianism

Inputs: Luck

How to calculate: The option with the lowest luck value is the best output. OR allocate more resources to less luck weight user to reach equal distribution.

E.g. A = 8 luck; B= 2 luck; Resources = 10

Discount for the effects of luck =

total luck is 10

B has 20% luck and A has 80% luck

Flip this to get weightings (i.e. discounting for the effects of luck) so B has 80% weighting and A has 20% weighting

Equal distribution = 1% of resource for each 1% weighting

Thus, distribute so B gets 8 resources and A gets 2 resources

QUESTION：focus on one purpose and allocate resources? Why hard to choose the best preference and why other egalitarianism principles seemed reasonable? How to decide which principle would be used?

Autonomy Egalitarianism

Inputs: Autonomy

How to calculate: Choose the outcome with the most equal distribution of autonomy between users. If the distribution for each preference is the same, choose the highest autonomy.

Eg. best outcome = arg min(the difference of autonomy between users for each preference), if no minimum difference, arg max(autonomy for each preference)

Non-Maleficence Egalitarianism

Inputs: Harms

How to calculate: Choose the outcome with the most equal distribution of harms between users. If the distribution is the same, choose the lowest harm.

Eg. best outcome = arg min(the difference of harms between users for each preference), if no minimum difference, arg min(harm for each preference)

Equality of Opportunity

Inputs: Opportunity

How to calculate: Choose the outcome with the most equal distribution of opportunities between users. If the distribution is the same, choose the most opportunity.

Eg. best outcome = arg min(the difference of opportunity between users for each preference), if no minimum difference, arg max(opportunity for each preference)