Supplementary File S2. Themes, positions and examples of participants' narratives.

Individual agency and attributes

The participants discussed individual members of the system. They talked about individual attributes, including intentions, motivations, awareness, capability, and maturity, as factors determining whether the members could be trusted to manage the system. Within this theme, there were two positions that the participants frequently adopted. One position held that an individual had good attributes, such as good intentions (wanting to succeed, contribute, and work for the greater good) and capabilities (skills and experience). The other position held that individuals (at least occasionally) can be rule-breakers, and that not everyone has sufficient capability to be accountable.

Unity, chaos, and spontaneity

The participants discussed how a group of people could either unite or fragment into chaos. Their discussions of unity and chaos were tied to their expectations of how a group of people spontaneously behaves in the natural course of events. Some of the participants took the position that people naturally cluster cohesively; others took the position that people break away from unity and spontaneously create chaos.

Leadership and its origin, eligibility, and function

The participants discussed leadership. In this theme, the participants discussed who should be leaders, why a group needs a leader, and what a leader should do. The participants took two positions regarding leadership. According to the first position, leaders emerge from the group. Such people are leaders because of their charisma and capability, and because they lead by setting an example as pathfinders that others will follow. According to the second position,

leaders should come from outside the group. Such leaders are officials from a higher level in the social hierarchy.

Natural changes over time

Within this theme, the participants talked about the expected changes in a system over time if there is no outside intervention (and thus, the change is natural). A statement needed to explicitly mention a long-term timeframe, such as 'gradually' or 'as time goes by', to be categorised as belonging to this theme. There were two positions in this theme. According to the first position, a system deteriorates in the long term, even if it is well organised in the beginning. According to the second position, a system gradually adapts, evolves, and improves, despite facing obstacles along the way.

Responsibilities and functions of institutional structures (e.g., law and policy)

The participants discussed the roles of institutional structures such as law and policy. The participants talked about the responsibilities borne by those who administer institutional structures and how they should fulfil their duties. According to one position taken by the participants, institutional structures should actively monitor and enforce social order by giving direction and constantly checking for rule breakers. According to another position taken by the participants, institutional structures should establish platforms (e.g., by setting up a fair system and then stepping away) to facilitate (e.g., helping when required) and catalyse (e.g., expedite progress) individual performance. In short, there was a hands-on approach and a hands-off approach.

Narratives

Lin (S2) exhibited a balanced perspective. He explained his positions regarding the management of the volunteer club, saying,

It depends. If the student members sincerely want to serve others, we should let them manage the club. They will have good ideas about how to run the club.... But I also somewhat agree that the existence of a teacher could be helpful. When you have many members, there will be many ideas. Occasionally, there might be students who want to show off by demonstrating how unique they are. In such a situation, one teacher, who has authority, can help resolve conflicts and unify ideas....

The most important factor is that the students should be responsible. If everyone has the same interests and goals, they will unite.... I think the school only needs to check at the registration level (meaning officially registering the club as part of the school). The school should give most of the power to the students.

Lin explained his position on the regulation of Uber, saying,

It's safer to have the government involved in regulating Uber. Some drivers will charge customers unfairly. People have their own self-interests; everyone wants more money.... If the customers give increasingly positive feedback on good drivers, and the bad drivers are eliminated through competition, the Uber system will eventually improve.... The government can monitor the drivers' ratings, identify their plates and licenses, and sanction untrustworthy drivers. Then, the better drivers will remain in business, providing a better service for the public.... On second thought, though, the drivers might bribe customers for better ratings. It would be better to have the government more involved.

Lin was relatively sympathetic to student self-management. He believed that students who share the same interests will be united and recommended that the school only become involved during registration in the role of a gatekeeper. He also considered the possibility that

some students were outliers who could be assimilated into a common norm. In the case of strong outliers, he also welcomed the involvement of a single teacher as an arbitrator and unifier. For a similar reason, Lin recommended that the government regulate Uber to solve the problem of drivers who deceive and commit fraud. In his reasoning about expected change over time, he suggested a feedback loop that gradually improves the Uber market through fair competition, charging the government with facilitating the competition platform. Lin offered a prototypical example of a balanced view, one sympathetic to a hands-off approach but welcoming external control over possible 'bad apples' within the system. As shown in Figure 4, other participants from the self-organisation group who considered external intervention also mentioned that some members of a group might not be accountable.

Hui (S6) was a strong advocate of the hands-off approach. She explained her position on the management of the volunteer club and provided several ideas, saying,

> *I would prefer that the club be completely handed over to students and that the school not be involved at all…. I think most students are pro-social, especially those who would like to participate in the volunteer club. I believe that if everyone contributes some kindness, student control should work…. I don't think there will be too much of a problem. College students are mostly adults. I believe they have the ability and the intention to organise this club well. This is a good opportunity for them to develop and become more mature. They cannot adapt to society if the elders always protect them…. If everyone begins with goodwill, they will make efforts to work together in the club. A leader will always emerge, and the other students will respect that person. He/she will be a good leader, and everyone will work together to make the club great…. We need to take the time to*

practice handling the real work in society. Maybe we are only college freshmen and we

are not very experienced, but we should do it ourselves so that we can develop ourselves.

Hui spoke about her position on the regulation of Uber, saying,

I know some are worried about 'black cars' (illegal taxis that overcharge and are

unsafe), but there are only a few of them. Uber will add convenience to people's lives.

Traditional taxis can still run their businesses. I don't think there are any serious

conflicts…. In a healthy society, people can follow rules without government involvement

and intervention…. This requires citizens to have awareness, a spontaneous idea that is

shared by all…. But it is difficult to do so in the current situation in China. People's

qualities (character, virtue) need to improve…. So, I think the government should be

involved a little bit, to set the rules that can constrain the drivers. But its role should be

limited, and Uber should run as usual.

Hui was optimistic about student self-management. Her optimism was based on the

assumption that most group members were pro-social, that they would be united by their shared

interests, and that capable leaders would emerge. Her optimism was also applied to the

regulation of Uber. She believed that ideally, Uber drivers could regulate themselves if they

shared the same awareness, but considering the situation more realistically, she recommended

minor government involvement.

Lu (E2), who supported strong interventionist approaches, was a prototypical example of

the entropy group. She explained her position on the volunteer club:

This is a difficult question; it fundamentally depends on the teacher who joins the club. If

this teacher wants to manage the club well, he will work hard at it. That's good for the

club. If the teacher is only here for the title, does not do much work, and hands over all

the duties to students, then the club is doomed to fail… Anyway, I think it would be better to have some teachers in the club; they are older, more capable, and more experienced than the students. If they are responsible and want to do their duties well, that is good for the club… If students manage the club themselves, it will be perfectly fine in the beginning, no problem. But, as time goes by, you know, when there are people, there is a power struggle, and then there will be conflicts. When some students have increasing power, they will have increasing conflicts. I believe everyone has two sides; some of the time, you are dominated by your kind side, but at other times, the evil side takes over. When self-interests lure a person's evil side, he cannot resist it…. Power struggles are so common among club managers: there will be a number one and a number two. Everyone will think he/she is better than others and will want control over others. Everyone will want to take the credit and also the benefit. I don't think people place their moral standards before lucrativeness. I think the best system should control the smartest people so that they cannot sneak through the loopholes. But of course, everyone should be involved in designing such a system; once it is well designed, you can let it run…. I trust the school administrators more because they are outside of the system and outside of our conflicts of interest. They will see problems from a neutral and fair perspective. They can monitor and manage without being entangled in a conflict of interest.

Lu explained her position on the regulation of Uber, saying,

My first intuition would be to have a government-owned version of Uber. Because the government has authority, it is more official. It can identify every driver and every customer, and so it would be safer. When there is any problem or conflict, you know whom to call…. Conflict of interest is unavoidable, it is destined to happen, and I think it

is very difficult to prevent…. I am afraid that Uber cannot regulate itself. The odds are 70% against it. I think we need the government or a third-party agency to regulate it. Of course, the customers should have a say. But after all, the government dominates and controls everything.

Lu believed that power struggles and conflicts of interest are common and unavoidable. She preferred regulators from outside of the system to resolve conflicts, restore harmony, and maintain order. She not only preferred the existence of an external regulator but also expected the regulator to practice active leadership and provide arbitration for the system. She had the complete opposite expectation of change over time than did Lin and Hui. She assumed that a highly ordered system would spontaneously collapse over time.

Tsai (E5) was another example of the entropy group. He explained his position on the management of the volunteer club, saying,

I think the students should have most of the power and take most of the responsibility. But there will always be times that they encounter problems they cannot solve. Therefore, it would be good to always have some teachers involved to give instructions… Although college students are already adults, they do not have experience in society. An instructor would have more experience and more connections than students…. Without an instructor, the students will probably be shy in the beginning. They don't know which direction to go, they are afraid of taking action, and they restrain themselves in a small space. But as they relax and expand to a larger space, they will probably become too daring and unchained, and they will forget who they are and their limits…. [Question: 'What do you mean unchained?'] …They will go in all directions, do too much, and make a mess.

Tsai further explained his position on the regulation of Uber, saying,

I think, although our government is not always accountable, I still tend to trust the government…. I can understand that car owners want to make some money using their own cars. If the government promotes this kind of economy and publishes a comprehensive system to regulate it, that's fine…. Without government intervention, however, there will remain the possibility of illegal conduct. Granted, there might be some trustworthy drivers, but there might also be some drivers who would kidnap you for ransom…. We don't need the government to manage the company, but we do need the government to create a complete regulatory mechanism and monitor the company and its drivers…. I don't think it is practical to expect a healthy market without government control, at least not in our current society. Maybe it will be possible when communism is achieved. But I don't know how many years it will take, and it is not likely to happen before I graduate from college… [Question: 'What would communism look like?'] A perfect social economic system, a perfect legal system, in which everyone has awareness of the law. All citizens are united to cooperate with each other and with the government. Not now, not like this.

Tsai, unlike Lu, did not strongly believe that people are destined to struggle with each other. He had hopes that the students should be the key players in the club and that Uber should remain a private company, but he did not directly acknowledge that students or Uber drivers were accountable. He believed that even if (hypothetically) some members showed goodwill, the potential problems and 'bad apples' would disrupt the entire system. He preferred an external agency that not only created and maintained the platform but also actively provided instruction or supervision to the members. He also shared the mental model in which particles condense

initially, but that they behave chaotically as they expand. He envisioned a perfect society that he labelled 'communism', in which all institutional structures would be perfectly designed and all people would abide by the laws as a united group. His vision for a top-down unity contrasted dramatically with the vision of Hui and Lin, which was built from the bottom up at the level of individual members.