1. Fundamental challenges in designing a collaborative travel

Dickinson, J. E., Cherrett, T., Hibbert, J. F., Winstanley, C., Shingleton, D., Davies, N., ... & Speed, C. (2015). Fundamental challenges in designing a collaborative travel app. *Transport Policy*, *44*, 28-36.

Key Findings

Through field trials and interviews, this paper examines the fundamental challenges of using collaborative travel apps in settings such as rural areas, urban fringes, and campgrounds in the UK. Key findings include:

User Adoption Difficulties

Attracting users to these apps is inherently challenging. Many feel they don't need or are unwilling to adjust their itineraries to accommodate others' journeys.

Community size, the number of existing members in the network, and trust are crucial. Small communities are more likely to build trust, but larger ones may face challenges with trusting strangers.

Reciprocity Issues

While many users are willing to offer help (e.g., by giving rides or sharing items), they are less willing to request or accept help because it creates a sense of indebtedness, potentially impacting personal freedom, status, or psychological burden.

The inability to reciprocate also discourages some users, such as travelers, temporary visitors, or those with limited resources, from participating.

Time Pressure and Sense of Control

Users are generally sensitive to time flexibility (such as travel time, activity duration, and traffic delays) and dislike rigid plans; they value flexibility. If an app requires someone to provide a ride or assistance at a fixed time and location, they may be reluctant to participate due to the sacrifice of their freedom.

Arrangement details (when, where, cost sharing, etc.) often cause people to abandon their app because they are complex to negotiate and the process is unintuitive.

Incentives and Community Type

The presence of rewards or feedback, reputation mechanisms, and credit records in the app can influence user participation. Different communities (e.g., tourist camps vs. residential communities) have different expectations for these mechanisms.

Most experiments involved limited communities, geographical proximity, or pre-existing social networks, making these scenarios more likely to succeed. Collaboration between distant individuals or strangers is more challenging.

App Design Details and User Experience

Visualizing exchange examples (showing which assistance has already occurred) and visualizing "potential sources of help" (who can help and when) can boost user confidence. It also allows "lurkers" (those who only watch but don't participate) to see the system in action, potentially turning them into participants.

Future Technologies/Possibilities and Risks of the Internet of Things (IoT)

The IoT can make systems more predictive, automatically detecting who might have a parking space available, who might be out, and when assistance is available, thereby reducing the burden on users to proactively request or provide assistance.

However, this also raises issues of privacy, security, and the pressure of passively accepting advice or assistance. Frequent or mandatory system prompts can make users feel monitored or out of control.

1. How do young Chinese friendship groups make travel decisions? A content and interaction process analysis

Song, H., Wang, Y., & Sparks, B. A. (2018). How do young Chinese friendship groups make travel decisions? A content and interaction process analysis. *Journal of Travel & Tourism Marketing*, *35*(6), 772-785.

Song, Wang, and Sparks (2018) focused on travel decisions among young Chinese friendship groups, using content analysis and interaction process analysis to explore how groups reach travel decisions through discussion.

Decision Content Level

Group discussions focused on key factors such as activity arrangements (what to do), budget and cost, time, transportation, weather, and safety.

Members typically made trade-offs based on personal interests and practical constraints.

Interaction Process Level

Verbal interaction: Decisions are driven through proposals, support, opposition, and compromise. Who speaks more and whose opinions are adopted directly influences the direction of the group.

Non-verbal interaction: Behaviors such as nodding, facial expressions, and silence are also imbued with meaning. For example, silence can indicate agreement or dissatisfaction.

Group Dynamics and Outcomes

Decisions are often reached through negotiation and compromise, rather than through clear agreement from the outset. There's a tension between individual preferences and group dynamics. Sometimes, powerful speakers dominate, leaving less powerful members to defer or remain silent.

The final decision often reflects the collective group atmosphere rather than a purely rational choice.

The paper shows that young people struggle primarily over topics like activities, budget, time, transportation, and safety.

Implications for our project: Wearable devices to enhance collaborative travel

The system can provide features for collecting and visualizing preferences around these dimensions, such as quick rating or ranking interfaces, to prevent discussions from becoming chaotic.

Wearable devices can capture "silent opinions" through anonymous voting, emoji feedback, and simple gestures, allowing everyone to express their opinions, rather than relying solely on those who speak most.

Because powerful speakers often dominate the outcome, tools can indicate which members' opinions have not been considered, helping to maintain fairness in group discussions.