

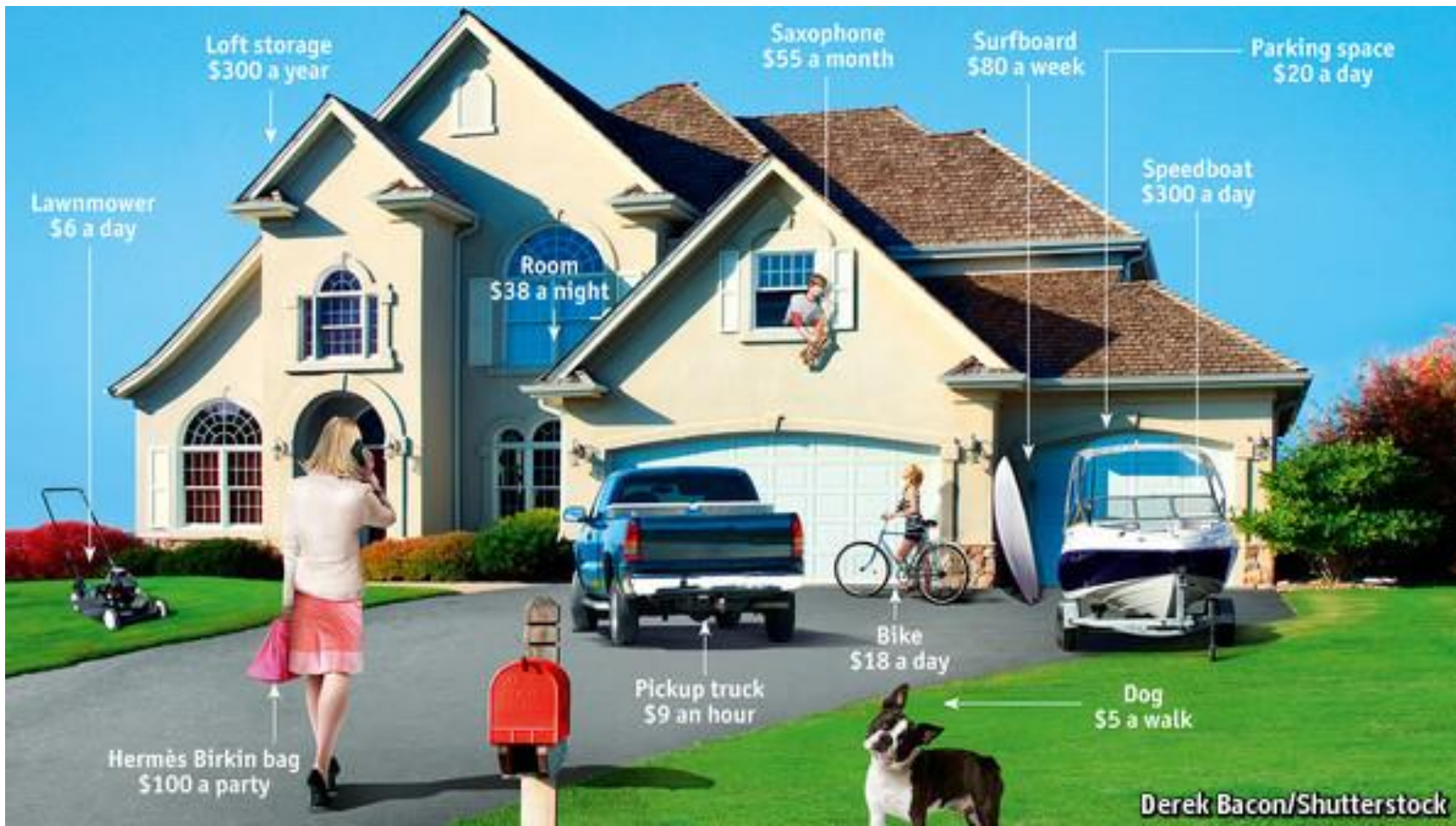
# 공유경제 모델에서 사용자의 자원남용 문제 해결을 위한 플랫폼 디자인 연구

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You can find everything you need through *Sharing Economy (SE)*



## What's the Sharing Economy

- A novel way of exchanging assets(goods/services)
- Fully utilize UNDER-utilized assets
- Labor is also tradable (On-demand economy)

## The role of platform participants

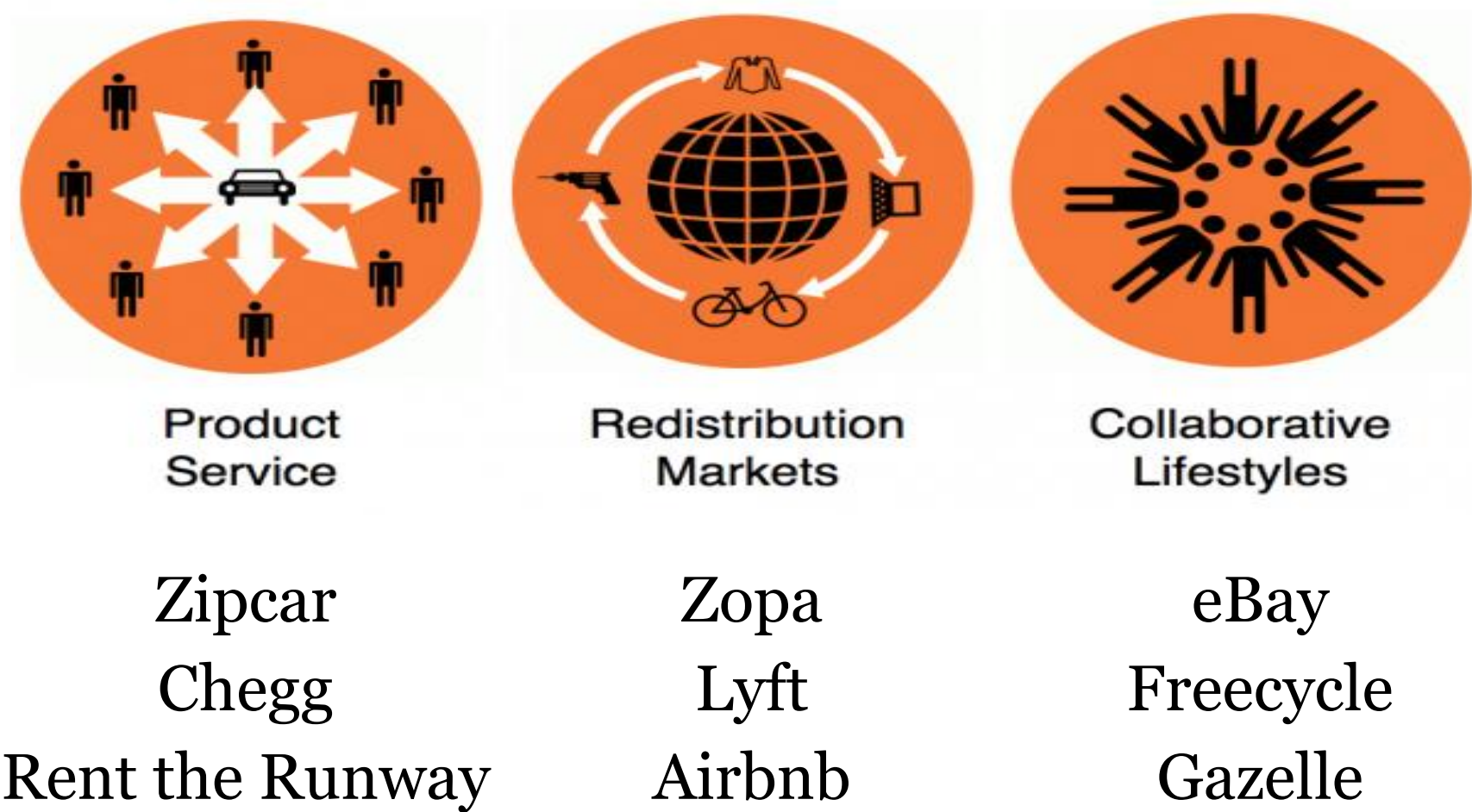
### Platform

- Provide tools for information search, matching, contract

### Granter/Buyer

- Buy/sell the right of temporal use of assets based on the contract

## Collaborative consumption: 3 systems



## Motivation

- Risks to property owners
- Risks to borrowers (regarding safety)

## Infamous Sharing Economy incidents



House seriously damaged after renting it through Airbnb

**NYTimes: Raped, Literally, By the "Sharing Economy"**

By Dartagnan  
Saturday Aug 15, 2015 • 8:01 PM EDT

19-year old boy raped by Airbnb host

→ De-incentivize platform participants

- How to deal with the problems?
- How should platforms design their systems to prevent the problems?

## Data collection from SoCar (Working)

- Car sharing platform
- 120,000 users, 1,000 cars
- Behavior modification
  - ✓ Penalty rule
  - ✓ User networks based on the cars
- Measure the effects of both *incentive* and *community-based mechanisms*



## Three types of Transaction Costs

- Search and information costs:
  - ✓ For searching information about goods/services and granters who are willing to provide it
- Bargaining costs
  - ✓ For negotiating terms for contracts that both parties agree to follow
- Policing and enforcement costs
  - ✓ For monitoring and enforcing the participants based on the terms enacted by contract

Resolved in SE platform

Still exists in SE platform

*Almost impossible to monitor all participants' behavior*

## Behavior modification

- How to minimize the 3<sup>rd</sup> costs?
- In other words, how to ensure that both parties behave in a way that they agreed upon?

## Penalty/incentive mechanisms for resolving social dilemma (Fehr and Gächter 2000)

- Incentive for cooperation
- Punishment for free-ride

## Community-based mechanism

- Through member's reputation in the community (Milinski et al 2002)
- Through social risk (Schlenker and Leary 1982; Eisingerich et al 2015)
- Through member's commitment to the community (Bateman et al 2010)

## Expected contribution

- Validation on the community-based mechanism for inducing cooperation
- Comparison between the effects of the two mechanisms: Incentive and community-based mechanism
- Practical implication to platform owners on how to design and implement eco-systems for the sake of long-term benefits of the community (or platform)

## References

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- [2] Milinski, M., Semmann, D., and Krambeck, H.-J. Reputation helps solve the 'tragedy of the commons'. Nature, 415, 6870 (January 2002), 424–6.
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- [5] Bateman, P.J., Gray, P.H., and Butler, B.S. Research Note—The Impact of Community Commitment on Participation in Online Communities. Information Systems Research, (January 2010).