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# Co-Production Issues in Time Banking and Peer-to-Peer Exchange

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**Abstract**

New exchange systems are emerging worldwide, energized by the unlikely combination of prolonged and pervasive economic recession and new information technology infrastructures. This paper proposes to investigate co-production issues in the new paradigms of time banking and peer-to-peer exchange.

**Author Keywords**

Co-production; time banking; peer-to-peer exchange

**ACM Classification Keywords**

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

**Time Banking**

*Time banking* is the valuing of service contributions by the time taken to produce them, and mediating exchanges of effort and other contributions among community members by adjusting time credit balances (Cahn & Rowe, 1992). For example, one person might have a car, and can drive neighbors to appointments and grocery shopping; another may be an accomplished gardener. Each can contribute effort to the collective time bank, and draw against their resulting time balances to make requests, perhaps having someone mow their lawn. Time banking is an alternative economic paradigm to exchanges of money.

Because it emphasizes person-to-person interactions, and because all contributions are valued equitably, time banking strengthens local social ties and social capital, and enhances personal dignity in ways a money-based economy does not (e.g., Seyfang, 2009).

Time banking has spread rapidly in recent years; for example, the non-profit organization I worked with, hourWorld, facilitates about 130 time banks (mostly in North America) and 12,000 members. Community Exchange System facilitates 598 exchange groups (many are or incorporate time banks) in 61 countries. The number of time banks in Spain has doubled during the past three years, to about 300; the number of time banks in the United Kingdom is also about 300.

### **Co-production**

*Co-production* of services and value is producing outcomes through collaborations among recipients, providers, and other stakeholders; in co-production all stakeholders have power and responsibility to identify and achieve successful outcomes. The concept of co-production originated in the observation that effective delivery of a social service sometimes depends on the active involvement of the service recipient. The signature example is Ostrom's (1996) analysis of the increase in Chicago street crime that coincided with police switching from walking a neighborhood beat to patrolling in cars. Ostrom argued that car patrols reduced contact with residents, diminishing the extent to which neighborhood safety was pursued as a joint project of police (service providers) and residents (service recipients). A police officer in the street is better positioned to co-produce public safety with public involvement: Police and residents get to know one another better, trust each other more, share and

display awareness of events, and directly and indirectly collaborate to provide neighborhood safety.

Many time banking exchanges are co-productions: When Sue gives Joe a guitar lesson; both are active participants in the service exchange. Moreover, the service provided by Sue to Joe creates a capacity for further service exchanges within the community, for instance Joe giving a guitar lesson to Ed. Co-production has been identified as a key to strengthening the core economy of home, family, neighborhood and community (Glynos & Speed, 2012).

Cahn (2010) extended the concept of co-production, including partnerships among communities and agencies, as well as among individual community members and service professionals. Drawing on Cahn, Glynos and Speed (2012) distinguished *additive* and *transformative* co-production. In the former, service recipients contribute to the creation of a service without changing the way they see themselves, namely, as recipients or clients, and without changing the way the service provider or the larger community see themselves, or participate in the service. In *transformative* co-production recipient contributions to the service become so integrated as to change the way we construe what the service is, how such service is produced, and the roles and relationships among all stakeholders in the service.

On this definition, Ostrom's (1996) original example of cooperation among residents and Chicago police is additive co-production: All traditional stakeholder roles are maintained, but the service recipients cooperate with the service provider to (incidentally) contribute to the creation of a service benefitting themselves and

their community. Teaching and mentoring interactions can often be transformative co-productions: The service cannot be merely “provided,” but must be co-created. Following Cahn and Glynn and Speed, the challenge of co-production is reconceptualizing social service provision – and other exchange relationships – as relying on recipient initiatives in the context of a broader transformation of roles and responsibilities, including roles and responsibilities of government and other institutional entities. In Cahn’s notion, for example, social service professionals become facilitators more than providers, and services themselves are negotiated and produced by all stakeholders working together toward collective goals.

Glynn and Speed (2012) observe that co-production is structured by a logic of *recognition*, rather than by a logic of *exchange*. Consider a hypothetical case, in the Rushley Green time bank, of a member who has been referred to the time bank for depression, and who goes shopping with an elderly person as part of his or her treatment. Who is the service provider and who is the recipient? This is a case of transformative co-production; each party might very well wish to recognize the contribution of the other. And indeed, doing so would enhance the direct benefits of the interaction, for example, it might create social capital, self-efficacy, and other human development outcomes.

### **Peer-to-Peer Exchange**

Peer-to-peer exchange is the direct exchange of goods and services by citizens, mediated by a brokering entity that it typically embodied as an information system. It is an emerging paradigm that integrates economic and social interaction, creating a wide range of possibilities for innovation. It encompasses diverse services such as

ride sharing (lyft.me, side.cr), performing everyday tasks (taskrabbit.com, airtasker.com), textbook sharing (chegg.com, zookal.com), accommodation sharing (couchsurfing.org, airbnb.com), car sharing (relayrides.com, getaround.com), sharing parking spaces (parkatmyhouse.com, divvy.com.au), local food exchanges (farmigo.com), sharing household items (yerdle.com, openshed.com.au), exchanging home-cooked meals (cooking.com), sharing workspace and expertise (liquidspace.com, makermedia.com, wework.com). Most of these innovations have appeared recently under the rubric of the “collaborative economy” (ouishare.net, collaborativefund.com, www.shareable.net, www.peers.org). Time banking can be analyzed as peer-to-peer exchange.

Many peer-to-peer exchanges involve sharing goods and services “just in time”, that is, sharing precisely when someone needs something and someone else is prepared to provide it. Thus, one key to the success of peer-to-peer exchanges is close coordination of providers/offerers and recipients/requesters.

### **My contribution to the workshop**

I am currently working on mobile time banking. We have deployed iOS/Android apps through the hourWorld time bank network (about 12,000 users). We recently surveyed time bank attitudes and practices of 430 hourWorld members, including tensions around the time bank principle of equity (valuing all contributions strictly by the time required), and improvised hybrid exchanges involving both time and money.

We were surprised to learn that no time banking software supports co-production. Indeed, the “bank” metaphor conveys that time banking is fundamentally

about exchange, that is to say, about transactions between service providers/offers and service recipients/requestors (Bellotti et al, 2014). Core interactions for time banks include “making a request,” “offering a service,” “accepting an offer,” “accepting a request,” and “approving credit” (for a service rendered). There is no vocabulary to indicate that a service requested and provided was of mutual benefit.

We are now extending our investigation to include peer-to-peer exchanges not focused strictly on time banking, as above. This creates an interesting analytical turn since making a class of P2P exchanges emphasizes co-production over the time equity principle of time banking as the core claim.

Co-production scenarios of mobile time banking are disruptive elaboration of the paradigm. Co-production seems to be governed by a logic of recognition not contribution: Members who contribute to a collective good are recognized, but not necessarily compensated hour-for-hour. Thus, the elderly neighbors who keep an eye on street activity and enhance neighborhood safety are not actively producing a service for someone in particular; rather, through their awareness and local knowledge, they are co-producing a generalized public good. Publicly recognizing such co-production is itself a generalized public good – a validation and encouragement for civic responsibility.

Community informatics is action research; it does not merely seek to understand community and technology, it seeks to transform and enhance community through new information infrastructures. Time banking and co-production are alternative paradigms for economic exchange and social service provision; they both entail

and require new information infrastructures. We are moving from *additive* to *transformative* conceptions of time banking and other peer-to-peer exchange relationships, and investigating not just how voluntary time banking exchanges can exist within the broader context of a bureaucratic and market-based framework for social services and exchange, but how time banking and co-production could change our sense of value and valuation, and the ways we exchange services, appreciate one another, and develop as human beings.

### **Acknowledgements**

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