

THEMED ESSAYS

Cooperative Entrepreneurship: Future Back Thinking, Translation, and Digital Organizational Change in the Credit Union Space

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Abstract

In this essay, I examine cooperative entrepreneurship's role in driving digital organizational change in a Southern California credit union that caters to a mobile university population. Drawing on Joseph Schumpeter's interpretative approach to entrepreneurship, I highlight the pivotal role of an innovative CEO in combining a new technology, AI chatbots, with the credit union's existing technologies to create a new means of production in a contact center: AICCs or Artificial Intelligence Contact Center Agents. I extend Schumpeter's theory by showing both how future-back thinking can generate ideas for new methods of production, and how acts of translation can help align these methods with local organizational values, overcoming resistance to change. I suggest that such combinatorial activity can help credit unions to sustainably compete against a new breed of financial technology companies known as fintechs.

Page 1 of 12

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Translation, Entrepreneurship, Credit union, Artificial intelligence, Organizational change.

In an article entitled “The Creative Response in Economic History,” the Austrian economist Joseph A. Schumpeter (1947) defined the entrepreneur as someone who, rather than merely “adapting” a business to changing social and economic circumstances (for instance, population increases or regulatory changes), does something “new” in ways that irreversibly change it. That new thing need not be of earth shattering importance like creating a new process for manufacturing steel or inventing the combustion engine. It could be as simple, he argued, as developing a premium brand of sausage. The key is simply doing new things or doing things that have already been done, but in a new way. For Schumpeter, it made little difference whether the entrepreneur as purveyor of the new was an individual or a group. Collectives were every bit as capable of engaging in entrepreneurial activity as enterprising individuals (1947: 151-152).

The collective dimension of entrepreneurship is particularly relevant for the type of cooperative enterprise explored here: credit unions. At first glance, credit unions are not the type of enterprise that one would immediately associate with entrepreneurship. Created at the turn of the 20th century to help underbanked individuals like factory workers gain access to credit, credit unions’ economic activities are highly circumscribed by government regulation. The 1934 Federal Credit Union Act (FCUA), which enabled credit unions to incorporate in the US, imposed several restrictions on credit unions that continue to potentially limit their entrepreneurial capabilities.

Foremost among these restrictions is geography. The FCUA mandates that credit unions can only attract new members who are either united by a “common bond of occupation or association” or belong to groups “within a well-defined local community, neighborhood, or rural district.” In modern business parlance, this limits credit unions’ ability to “scale” or acquire new members beyond an organizational context or delimited area. On the lending front, FCUA also restricts the amount that credit unions can lend to member businesses to 12.25 percent of total assets, while setting up an upper limit of \$50,000 on member business loans. Finally, the FCUA limits the quantity of capital that credit unions can invest in upgrading their consumer-facing technology to one percent of their assets minus reserves (Nelms and Rea 2019: 62-63).¹ This makes

¹ See also Code of Federal Regulations (CFR), 712.2, <https://www.ecfr.gov/current/title-12/chapter-VII/subchapter-A/part-712>

it difficult for them to compete with the consumer-oriented, technological innovations of major banks and financial technology companies.

Credit unions are also cooperative organizations – another potential brake on their entrepreneurial activity. As such, they are member-owned, not-for-profit institutions, guided by the democratic principal of one-person-one-vote. This means that credit union CEOs and board members serve at the behest of credit union members rather than stockholders demanding outsized profits. As not-for-profit associations, credit unions are exempt from federal taxation, requiring them to pay out all profits to members in the form of lower borrowing rates or higher interest rates on deposits (Emmons and Schmid 1999: 44). And credit unions must also work for the sustainable development of their local communities, including people of limited means, in keeping with policies developed by their members.²

On the surface of things, such constraints might seem to account for the precipitous drop in the number of credit unions in the United States: from 24,000 in 1970 to fewer than 6,000 today. Contributing to this contraction is a raft of credit union consolidations. Motivated by the competitive need to achieve “economies of scale,” such mergers signal the need for credit unions to increase their competitiveness by increasing their size and assets while expanding member service to meet growing member expectations for digital convenience. Heightened capital requirements imposed by the 2010 Dodd-Frank Act have further accelerated this trend, forcing credit unions to “bulk up” to evade limits on available credit to their members (Nelms and Rea 2019: 27-28).

Yet, in spite of the shrinking number of credit unions in the US, credit union membership remains strong, growing at an annual rate of four percent and encompassing more than 111 million members (2019: 27). As a pair of Federal Reserve economists note, this persistence of credit unions in the United States poses something of a puzzle. One might have expected corporate financial institutions with their “professional management” and “sophisticated capital-market oversight” to have replaced them altogether (Emmons and Schmid 1999: 41).

Apart from the regulatory constraints imposed by FCUA, credit unions also face competitive pressure from a disruptive entrant into the financial services landscape: a new breed of financial technology companies known as “fintechs.” The latter have pierced the formerly protected space of credit unions and banks by providing targeted, easy-to-use, mobile applications for individual financial tasks like making payments, borrowing money, purchasing insurance, investing, and personal financial and wealth management. These upstarts have

² For a list of the credit union cooperative principles, see <https://www.ncuf.coop/development-education/program/cooperative-principles/>

decentralized the financial services landscape. Specializing in customized financial solutions and “bespoke options” based on sophisticated analysis of customer data, these fintechs offer “best-in-class” solutions that easily trump the generic offerings of traditional credit unions and banks (Sieber and Guibaud 2022: 22). In doing so, they peel away revenue from traditional financial institutions with each consumer transaction involving easy-to-use apps on a smart phone.³

Cooperative Entrepreneurs as “Persons of Action”

Schumpeter’s theory of entrepreneurship (1947; 1949) offers one way of accounting for the surprising vitality of credit unions in the face of regulatory hurdles and competitive threats. As the founder of a historical school of entrepreneurship, in contrast to schools that rely on mathematical models, Schumpeter insisted on the importance of a context specific, interpretative approach to entrepreneurship, based on the examination of meaningful human behavior. This approach makes his theories well suited to the work of anthropologists. He also situated entrepreneurial activity historically in the context of culture, law, and politics, requiring theorists of entrepreneurship to attend to the actual practices of entrepreneurs as well as the conditions that “produce and shape, favor, or inhibit entrepreneurial activity” (1947: 158).

In doing so, Schumpeter ingeniously shifts the focus on entrepreneurship studies away from the general rule-based perspectives of economists to a particular type of person: the social change agent or *unternehmer*, literally “one who undertakes,” a person of action (Pfeilstetter 2021: 65). For Schumpeter, entrepreneurs are people (as noted at the outset) who either produce new things or the same things by a different method. They facilitate such changes by combining available materials and productive forces (technological, organizational, financial) in new ways that disrupt a previous equilibrium state. Such acts of combining can result in the introduction of a new good, a new method of production, or the opening of a new market. By engaging in such combinatorial activity, the entrepreneur takes existing innovations (rather than inventing them) and channels them in new directions (1949:66).

Aside from such creativity, entrepreneurial activity for Schumpeter requires one other factor: leadership. As he astutely discerns, creating new combinations of materials and forces, resulting in new products or means of production, requires swimming against the flow of custom and tradition. While new discoveries are readily available in the “existing store of knowledge,” most people fail to adopt them. Doing so requires departing from accustomed channels of knowledge and

³ Interview with Steve Williams, Cornerstone Advisors, March 28, 2022.

experience. Entrepreneurs, then, must be skilled in confronting the “forces of habit” that challenge embryonic projects. These sources of resistance can arise from members of the social group to which the entrepreneur belongs as well as broader legal and political challenges to “new ways of getting things done.” (1949: 79-80, 87-89). The successful entrepreneur is one who can overcome such resistance by framing projects in ways that appeal to the interests of those impacted by them.

Combinatorial Entrepreneurship: The Case of University Credit Union

Schumpeter’s emphasis on the entrepreneur as a person catalyzing new combinations of materials and forces while exercising leadership in the economic sphere offers a useful angle for exploring entrepreneurship in the credit union context. David Tuyó, the CEO of University Credit Union (UCU), provides an excellent case of the Schumpeterian ideal of entrepreneurship in practice.

In 2021, I interviewed Tuyó and got a sense of how he acquired a range of tools, techniques, and principals that laid the foundation for his entrepreneurial success at UCU.⁴ His journey to CEO at University Credit Union in Southern California took him from door-to-door sales, to finance and accounting, and then operations and board member roles at credit unions. Along the way, he picked up degrees in finance, economics, and business administration, along with certificates such as “foresight practitioner” and “innovation specialist” at places like the Institute for the Future in Palo Alto. He also became increasingly embedded in a web of social networks that prepared him for his role as an innovator at UCU.⁵

The impetus for Tuyó’s entrepreneurial activity arose from two sets of interrelated circumstances. The first was UCU’s distributed labor force. Headquartered in Westwood, California, a high-rent district sandwiched between Santa Monica and Beverly Hills, UCU faced a daunting labor shortage. To escape the high cost of housing, most employees commuted one or two hours daily to UCU’s headquarters from suburban districts lodged deep in the Inland Empire – places like San Bernadino, Riverside, and Rancho Cucamonga. Relocating UCU’s headquarters closer to its employees was not an option since most were scattered throughout the metropolitan Los Angeles area. As a result, Tuyó and his leadership team decided to build a fully remote workforce with a three-year planned rollout. When the first case of COVID struck California on January 26, 2020, they accelerated the plan, implementing it in three months.

⁴ David Tuyó, personal interview, April 2, 2021.

⁵ For a similar case, see Latham 2002.

The second factor driving Tuyó's innovation strategy was UCU's distributed member base. As the credit union for 13 California research universities, its membership consisted of university students, faculty, and staff who resided in all 50 US states and over 30 countries. For Tuyó, innovation in the form of digital transformation was necessary "to meet its members where they were at." That meant serving members in a way that was not branch reliant – that is, digitally – ensuring them 24/7 online and mobile access to UCU's services.

Tuyó addressed these employee and member needs with a ready at hand innovation: AI-driven chatbots. Tuyó's plan began with a chatbot named Royce. Named after the University of California Los Angeles hall, where UCU was founded in the 1950s, Royce started out as a chatbot on UCU's home page. But as it gathered member "intel," it quickly evolved into a conversation bot, helping members with loans, applications, and banking transactions. With the flick of a finger, members could download Royce to their iOS or Droid-enabled devices, tell it to transfer money or provide a bank balance, and the transaction was immediately performed, all over the phone. In a third phase, Royce morphed again into an AI-driven resolve bot, servicing member IT tickets and providing things like password resets. In a subsequent iteration, it replaced UCU's intranet, providing employees with up-to-date information on UCU policies and procedures.

In the context of COVID, Royce became a "game changer." While other credit unions struggled with overflow calls from besieged members, UCU's contact center leaped from 60 percent to 75 percent automation. Tuyó described Royce's ability to learn as theoretically infinite. Instead of putting members on hold, it could answer thousands of phone calls simultaneously and with 96 percent accuracy. Anything that Royce could not answer rolled to UCU's "member success coaches" so that members could be served immediately.

In developing his bot strategy, Tuyó embodied the combinatorial activities of the Schumpeterian entrepreneur. He leveraged the existing resources and technologies of UCU – customer data, software platforms, communication tools – and combined them with new technology components (productive forces) such as natural language processing algorithms and machine learning models to create a new customer service solution. By utilizing chatbots, UCU harnessed the productive force of automation, streamlining customer interactions, reducing response times, and providing more cost-effective customer service.

Yet, Tuyó also blended his AI-driven bot innovations with the egalitarian values of UCU as a cooperative financial institution. Those values structured the way that Tuyó implemented AI in the cooperative context. Rather than using the efficiencies of AI-driven chatbots to save money by downsizing UCU's labor force, Tuyó opted to "reskill" its contact

center employees, training them to become experts in financial planning through a two-year program at UCLA. In this way, he combined workplace automation with a focus, as he put it, on “career pathing and job laddering.” Through a “knowledge-based approach,” contact center employees morphed into certified financial planners known as “member wellness and success coaches.” While bots answered basic member questions about moving money or wire transfers, the wellness coaches addressed more complex member concerns with things like job loss, health issues, and other life events such as death and divorce. For those closer to retirement, they also skillfully guided members in setting up trusts, estate planning, and managing investments.

Tuyo’s success as a cooperative entrepreneur, then, hinged on his ability to not only adopt new technologies like AI-driven automation, but also to translate their meaning to fit into a cooperative context like UCU. Such acts of translating require negotiation and, occasionally, conflict regarding the significance of new practices and how they align with established values and identities in an organization. Translation takes place when an entrepreneur like Tuyo leverages existing values and ideas to reframe the use of new practices (like AI-chatbots) and adapt them to a new organizational context (like a credit union) (Haedicke 2012: 47). Successful translation requires that the translator respects “the integrity of the interests” of other parties (like UCU’s members and employees) to enlist their support in the entrepreneurial project (Star and Griesemer 1989: 389).

For instance, in incorporating the chatbots into UCU’s software and communications infrastructure, Tuyo emphasized their ability to provide round-the-clock access to UCU’s globally dispersed member base. He also drew on local aspects of the cooperative culture such as commitment to community and social responsibility to offer a values-driven reason for transforming the nature of employee labor in the contact center. Rather than have employees perform low skill activities like providing account balances or resetting member passwords, Tuyo shifted the nature of cooperative labor to high skill activities that served a more important set of member needs – in areas like tax and estate planning. In doing so, he also helped the credit union achieve its social mission by increasing the value of the services delivered to UCU’s members while reducing overall costs and growing revenue. Cooperative entrepreneurship, then, required not only creating new combinations of material and productive forces, but also translating the new practices in ways that aligned with UCU’s cooperative values.

Future-Back Thinking and the Cooperative Entrepreneur

In addition to Tuyo’s ability to translate ideas about AI-driven automation in the cooperative context, one other feature defined his

entrepreneurship at UCU: future-back thinking. In their book *Lead from the Future*, the futurists Mark Johnson and Josh Suskewicz (2020) describe future-back thinking as an iterative and nonlinear form of thought that begins with actively immersing oneself in an organization's likely future environment and then taking steps to not only fit into that environment, but shape it to the organization's needs so that it can thrive in it. To arrive at this future, they suggest that organizations push their thinking out 10-15 years where the horizon appears fuzzy, like an impressionist painting. In doing so, they challenge leaders to identify key "inflection points" or "emerging fault lines" in their industry – future points in time in which new technologies will disrupt opportunities for business growth and open new ones. Examples of such inflection points include the future rise of autonomous vehicles in the automotive industry, customized gene therapies in the life sciences, and robotics and digital surgery in medicine (2020: 77-82).

David Tuyó embodied this type of future-back thinking in his chatbot strategy. Through his participation in the Members Development Company (MDC), an 83-member credit union service organization (CUSO), he worked with the Palo Alto-based Institute for the Future (ITFF) to develop a series of 10-year scenarios that showed what the world of credit unions might look like in 2030. The scenarios were generated from a consortium of ITFF futurists, credit union leaders from MDC, and additional third-party experts. The future scenarios considered, for example, the impact of new disruptive technologies, future low-cost competitors, and members' changing expectations. Each scenario was further paired with a set of "signals" to determine which scenarios might be developing over the course of the ensuing decade (Kline 2019).

Tuyó and his executive team leveraged these scenarios in conjunction with the "signals and drivers" to allocate investment dollars. Through a series of cascading decisions, they began working with the 10-year scenarios (which he called "Horizon 3"), where his team "thought about possibilities." They then pulled some of those possibilities into "Horizon 2," where they began making decisions about how to act. Finally, they began taking action (in "Horizon 1"), investing financial and human resources in implementing the best ideas (Cooke 2021). A MDC partner, Interface AI, a provider of intelligent "self-services" for credit unions, supported UCU in its bot implementation by developing a multi-year, customized chatbot strategy. The strategy evolved from chatbots to conversational bots, before morphing into full-blown voice banking and UCU's AICCs – Artificial Intelligence Contact Center Agents. Another MDC partner, ClaySys, then provided the programming services required to make the chatbot strategy a reality.

Returning to Schumpeter's combinatorial view of entrepreneurship, the future-oriented thinking promoted by Tuyó, MDC, and the Institute for the Future demonstrates that acts of entrepreneurial

combining need not take place through individual acts of insight or genius. Instead, Tuyo systematically laid the groundwork for his AI-driven innovations by co-developing the IFTF future scenarios, monitoring weak signals, and making what he referred to as “one or two big bets” annually to help “push the organization forward.” Future-back thinking ensured that those investments were not random guesses, but the outcome of an intentional process (Cooke 2021). Cooperative partnerships or networks – like Tuyo’s relationships with MDC, IFTF, Interface AI, and ClaySys – also played a critical factor in the innovation process. This aligns with Schumpeter’s point (1949: 75) that entrepreneurship can be carried out by anyone who carries out new combinations, including “dependent” employees of a company such as managers, CEOs, or boards of directors. By leveraging his network of partners and advanced R&D, Tuyo achieved outside results, particularly given UCU’s limited size (under 1 billion in assets) and scope (42,000 members).

Cooperative Entrepreneurship as Competitive Advantage

Credit unions in the United States face a number of structural and competitive challenges that, on the surface of things, would seem to discourage entrepreneurship. FCUA mandates that limit credit unions’ ability to scale (due to the common bond), lend to member businesses, and invest in new technologies make it difficult for credit unions to compete with major banks and fintechs. The non-profit status and member-owned, democratic nature of credit unions combined with their commitment to the cooperative principles of social responsibility and community reinvestment would also seem to restrict their ability to grow. The recent spate of credit union consolidations also highlights the competitive pressures posed by major banks and fintechs. The latter have disrupted the financial services industry through the introduction of convenient, easy-to-use, mobile payment, lending, and borrowing solutions. These new entrants have not only decentralized the formerly protected space of banks and credit unions, but have also accelerated the pace of digital innovation. Such disruptions pose the question of how credit unions have survived in the face of competitive industry pressures.

Schumpeter’s theory of the entrepreneur as one who creatively combines “materials and forces” to create new products or means of production while exercising leadership to overcome resistance to change offers an important lens through which to understand the ongoing vitality of credit unions in the United States. Casting that lens on David Tuyo and University Credit Union reveals the skillful way in which Tuyo leveraged an available resource, AI-chatbots, to address a set of culturally specific challenges – a locally dispersed labor force and globally dispersed member base – while reducing UCU’s costs and increasing revenues. At the same time, he aligned his AI-driven innovation with UCU’s

cooperative values. To justify the reskilling of UCU's displaced labor force, he crafted a narrative of organizational change in which the shift from customer service representatives to member wellness coaches helped the credit union achieve its social mission while increasing its competitiveness (Haedicke 2012: 53-55).

And yet, delving more deeply into Tuyo's journey reveals that he was deeply embedded in a set of cooperative partnerships that not only facilitated the implementation of his entrepreneurial ideas, but helped him to imagine those ideas in the first place. The 10-year, future-back scenarios that Tuyo developed through his relationships with the Members Development Company and the Institute for the Future laid the foundation for those innovations. When the signals of economic change burned brightly in the context of the COVID-19 pandemic and UCU's globally dispersed member base seeking 24/7 mobile access to UCU's services, Tuyo was ready. Within a matter of months, with his MDC partners Interface AI and ClaySys, he began rolling out his Artificial AI-driven chatbot solution. Through a series of successive iterations, these innovations culminated with the implementation of his cognitive AICCs – Artificial Intelligence Contact Center Agents.

Tuyo and UCU demonstrate the way in which credit unions can leap the structural barriers to cooperative entrepreneurship by embedding themselves in a web of partnerships. These relationships can enable credit unions like UCU to bat above their average, achieving more than might be considered possible given their size and resources. By actively imagining their future environments and developing scenarios in which they envision how they would fit into that environment, credit unions like UCU are able to compete and excel against larger rivals like major banks and fintech upstarts. The disciplined practice of future-back thinking not only helps illuminate the range of combinatorial possibilities at a given historical juncture, like merging AI-driven chatbots with existing member data and software systems, but also how to translate those combinations in ways that remain faithful to cooperative values. In the process, cooperative values in themselves become a competitive advantage as consumers seek alternatives to the profit-driven excesses of major banks, fintech start-ups, and cryptocurrency exchanges.

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