



Faculty of Design

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Understanding bitcoin currency and blockchain technology as a media system

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LAWS OF MEDIA TETRAD¹
Applied to bitcoin currency and technology

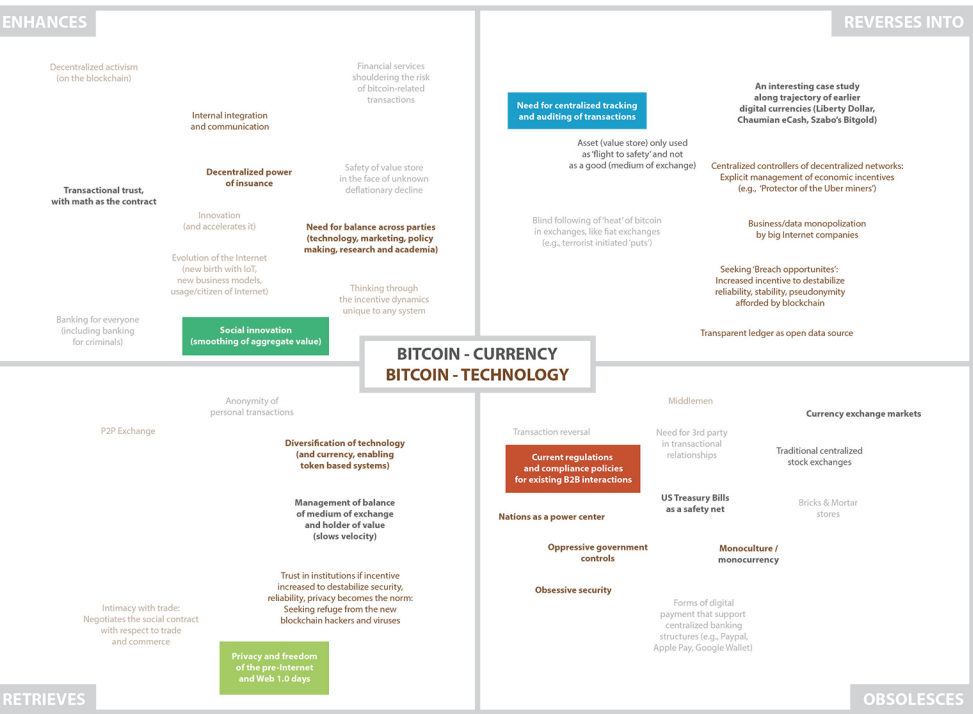
LEGEND
STRENGTH OF IDEA OR TREND
Strong = Bold
Medium = Regular
Faded = Weak

TETRAD AS PANARCHY³
Concepts and trends in bitcoin currency and technology considered within Panarchy model for complex adaptive systems.

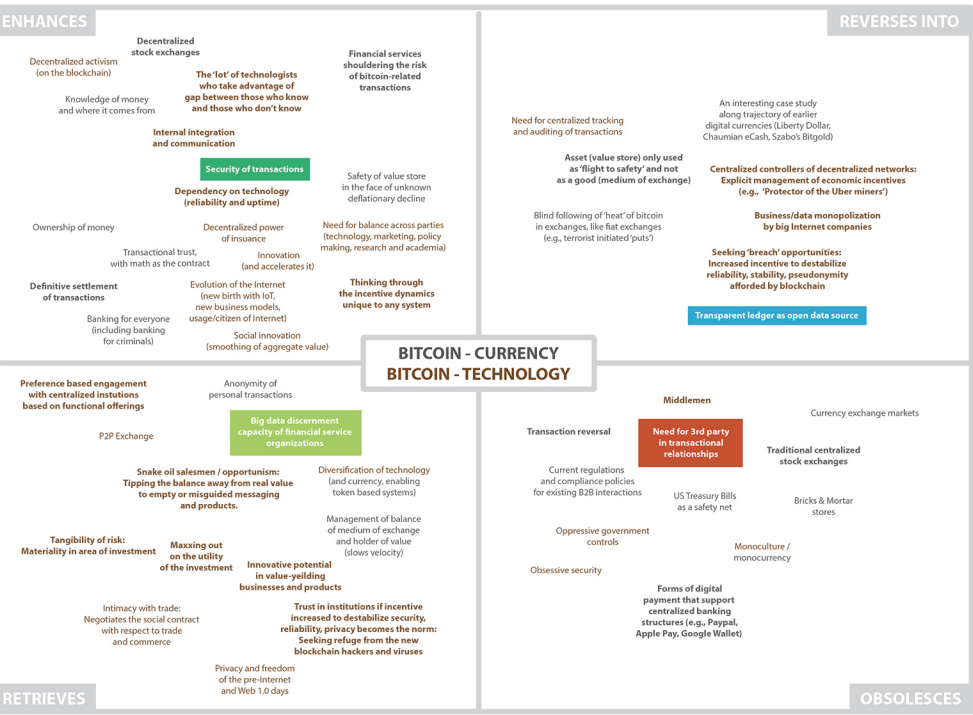
LEGEND
Spring
Summer
Autumn
Winter

The tetrad is a means of examining the effects on society of any technology/medium by dividing its effects into four categories and displaying them simultaneously². The graphic depicts various societal effects of Bitcoin, and the underlying blockchain technology, prioritized by their impact and importance through three different lenses: The Real Economy, Financial Services and National Currency.

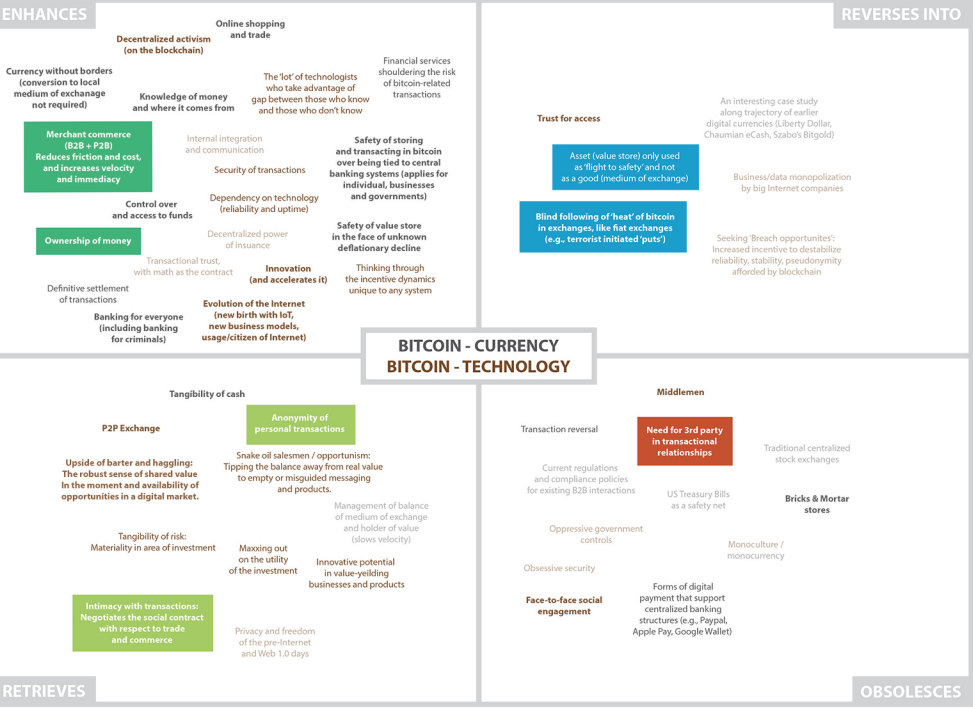
LEVEL 3: NATIONAL CURRENCY



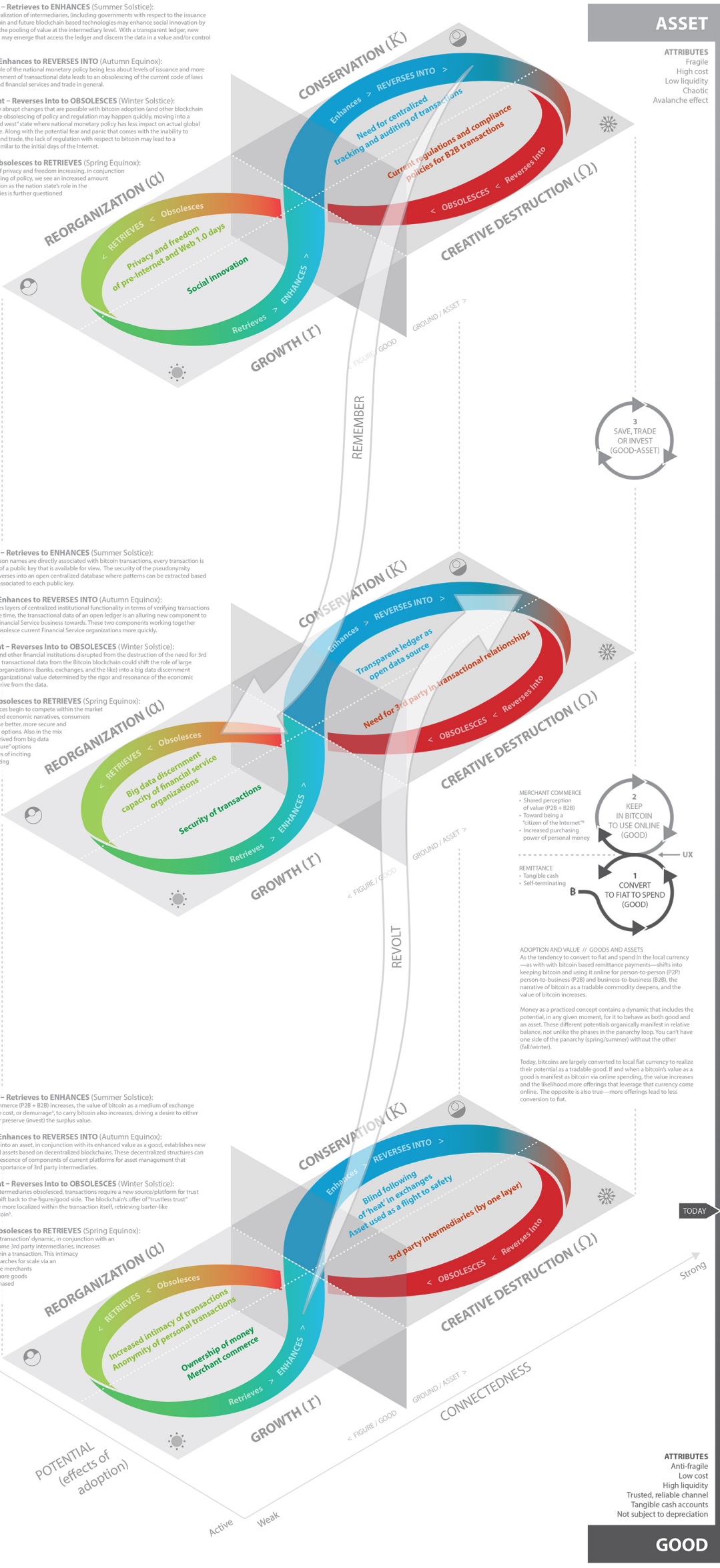
LEVEL 2: FINANCIAL SERVICES



LEVEL 1: REAL ECONOMY



By flipping the left side tetrad quadrants of Enhances and Retrieves, the effects in the tetrad are shown to articulate how Bitcoin and the blockchain may evolve over the adaptive cycles of the Panarchy model. The quadrants are labeled as seasons—the transition points from one quadrant to another as solstice and equinox—for the purpose of evoking the shared experiences of these liminal events in the context of these technological impacts.



1. McLuhan, M., & McLuhan, E. (1988). *Laws of media: The new science*. Toronto: University of Toronto Press.
2. Tetrad of media effects. (2014, February 21). Retrieved August 30, 2015, from https://en.wikipedia.org/wiki/Tetrad_of_media_effects
3. Gunderson, L. H. and Holling, C. S. (eds). 2001. *Panarchy: Understanding Transformations in Human and Natural Systems*. Washington, DC: Island Press. The original concepts of the Panarchy model come from Gunderson and Holling, however it is useful to see Noah Rafter's visual articulation with and without annotations on his site at <http://noahraford.com/?p=648>.
4. Lieten, B., & Belgien, S. (2011). *New Money for a New World*. Ottawa: Press (Dec 15 2011). As described by Bernard Lieten and Stephen Belgien in chapters 6 and 10, demurrage is essentially the carrying cost of a currency. The possibility of paying a penalty for holding the currency drives its circulation.
5. Graeber, D. (2012). *The Myth of Barter*. In *Debt: The first 5,000 years*. New York: Melville House. Barter is much more available, and happening, today as a result of the Internet. In looking at Level 1: The Real Economy, we observe that Barter is facilitated by blockchain technology, rescuing intimacy and enabling 'trustless trust' in online person-to-person (P2P), person-to-business (P2B) and business-to-business (B2B) transactions.
6. Interview Participant (2015, May 28). In discussing the opportunities afforded to people around the world that do not have access to banking or use of credit cards to pay for goods online, but have access to cell phones and Internet, the subject matter expert interview said that bitcoin strips away the barriers and as 'citizens of the Internet' they now have full access to everything through their cell phone.