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Policy-Driven Industrial Ecosystems. An Executive Summary and Managerial Implications.

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**Executive Summary and Managerial Implications:
Policy-Driven Industrial Ecosystems
(Simon F Dietlmeier)**

Abstract

Value networks represent administrative and managerial approaches to abstract reality by schematic modeling designs for noded interchange of goods and services between value absorbing – often coined as capturing – intentions or occurrences. Co-creation references absolute results stemming from communication, outreach and admission of thinking to academic or practical advancements, whilst relativity best describes daily interactions and their fuzziness in congregation of outcomes. This work summarizes value network implications for societal progress, with economic impact at core.

1. Introduction

In the course of network development, relevant theories have emerged in various disciplines – both academically and practically – to describe the interdependence between actors when exchanging information towards a common or unaligned value proposition. Although there exists a plentitude of research articles related to defining the varying constructs of such interactions, whether in an organizational or peer-to-peer constellation, the ontology and often times preciseness of construct definition has not yet been sufficiently differentiated (Kretschmer et al., 2022).

For instance, value exchange can occur in a business environment based on geographical characteristics, whilst the interest alignment of participants in a uni- or bidirectional relationship displays also elements of value creation and capture that rely on exogeneous factors. Nevertheless, most often the network inherent or endogenous elements decide about success and potential of an agglomeration of network nodes. The measurement of outcomes and impact is often enough fuzzy in nature, given that the value appropriability might depend to a large extent on the visibility of value-providing insignia (Manson, 2001).

Whether or not policymakers have sufficient insights into these kind of web developments can alter decisively according to a polity structure and cultural norms, often enough neglected by traditional forms of information systems theory. Purpose of this research is to providing an overview about the most seminal ideas for the specific value network lens „sovereignty“, and to link these for novel knowledge exploration in networked ecosystems.

2. The Foundations of Value Networks’ Constellations

When aiming to describe the different types of inter-actor information exchange, this task has been found challenging during the research, as various construct definitions seem to be colloquially applied interchangeably in day-to-day contexts. However, practical differences were undeniably postulatable, on whether a network occurs in a dedicated discipline’s realm, follows in its logic a pre-set value flow expectation, or comprises a certain group of node participants (Lungu, 2004).

This leads to commonly applied typologies of interactions depending on professional backgrounds of node representatives. For instance, in business environments, an often found differentiation addresses constellations of business-to-business, business-to-consumer, and customer-to-business value exchanges (Jaakkola & Aarikka-Stenroos, 2019). In a public policy field, the differentiation would rather concern the governance modes of advice exchange, for instance via stakeholder consultations or inter-governmental network alignments. An abstract view of these ontologically differing assumptions of network exchange might try to apply taxonomizing instruments describing influencing variables onto network graphs (Kergroach, 2019). These ultimately adjust a network structure, and could be purchasing activities in the prior or legislative decisions in the latter instances.

The identification of node systematics might invite for a vector graphical illustration (Figure 1), when existing properties of a node are compared with idealistic assumptions of its behaviour. Feedback experienced within a system may not only rely on other network nodes perception of an actors engagement, such as in the case of principle-agent theory, but also on the transaction costs expected to occur from a mutual exchange. This allows for an a priori adjustment of interaction readiness, as the willingness of actors to communicate and trade might comprise an expectation value

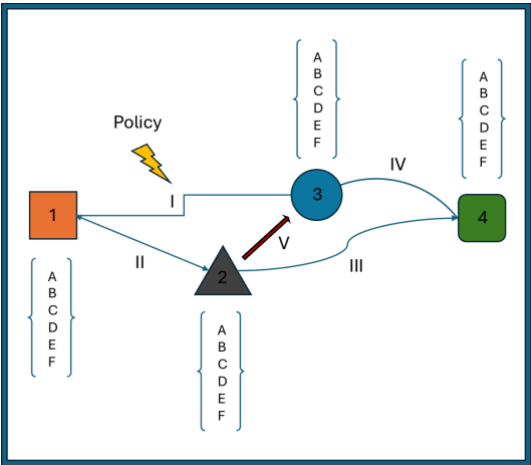


Figure 1: Networked Model of Policy Influence

depending on the environmental circumstance of this interchange. Once the reflection phase of past encounters has begun to be initiated, an a posteriori alteration of such an

instance perception might be unavoidable, due to longitudinal network constellation changes (Rustholkarhu, Hautamaki, & Aarikka-Stenroos, 2020).

Especially the research lens one applies to observing a value exchange could lead to bias in the observation validity due to outside influences, which only allow for an unclear and fuzzy understanding of participants' real experiences. Being able to differentiating the network position between inclusive and outside roles seems as relevant as the focus bandwidth of observation potential from micro to macro lenses. This may lead to considerably varying power differentials from a holistic network perspective. Once node organizational forms are differentiated between individual or collective, if not institutional arrangements, the actors' behaviour adjusts.

3. Methodology

Elementary approaches to decision-making in research are most often initiated by an idea based on the cognition of a researcher, who follows beliefs, emotional values and norms. In the process of research progression, a researcher plans the tasks to conduct, undertakes a researching phase, and analyses insights thoughtful for further evaluation (Aroles, Mitev, & de Vaujany, 2019). This then leads to a cycle of repetition, as the study has progressed to a stage of research question evaluation, which enables careful consideration of the phenomenon at question. Figure 2 displays a research vehicle, which summarizes the research design for this conference article from the on- to off-boarding of research steps throughout the enquiry.

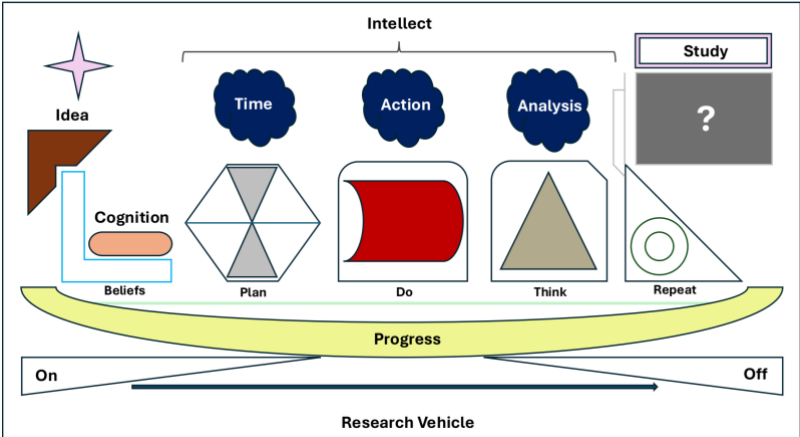


Figure 2: Research Progression during Projects

Empirical elements of the survey included site visits to industrial agglomerations, which allowed for an in-depth approximation of spatiality for value co-creation environments (Baskerville & Wood-Harper, 1996). When the situational awareness required exploration of further analysis, voice-over or in-person discussions with inhabitants of these quarters became necessary occasionally. This approach has been accompanied by archival research to sight different materials describing the projects and their partnership relations more thoroughly with illustrations (Floetgen et al., 2021).

All-in-all, the research can best be described as a roadshow experimental data gathering with research vehicles by car, train, plane, foot, or bicycle evaluating structures of sites. Rationale has been the sensing of surrounding influences on these establishments, given their susceptiness to environmental impact exerted by seasons, nature, and organisms. Prerequisite has been an open-door policy offered by the researcher that empowered key stakeholders approaching the work with confidence, discretion, transparency, and report.

This resulted in several waves of research flow for an iteration of insights generation, assumption probing, snowballing of furthering activities, and across-discipline thinking. Basic characteristics for research success relied upon a tranquility of the study facilities, depending on time, context, and foresight on potential disruptions by unknown events. The desideration has required persistency and mindful synthesis of research findings for actionable recommendations and managerial implications derived from a realistic lens.

Propositions have been disputed in dialectic manner up- and down in transit between sites and rejoiced with theory during phases of library-based research in static residence. Quality criteria applied considered ecosystem-related inquiry as holistic in its inherent built-up, by taking the validity, reliability, and generalisability between places into account. Risk has been mitigated by gaining a thorough understanding of the research stakeholders, environments of procedural hurdles, as well as the complexity of synthesis in prospects.

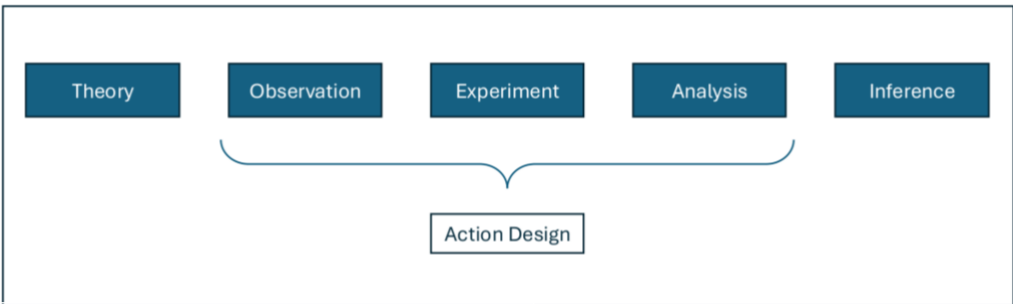


Figure 3: Research Design in a Mosaic

Figure 3 hence summarizes the elements of the research design and postulates the applicability of action research for this form of inference provision, also coined as „covert“. Stakeholders have nevertheless been informed by follow-ups about research progression, especially when related to feedback for public funding, to avoid skewed researcher bias. Maintaining key stakeholder contact could be beneficial in circumstances of self-made value co-creation, especially when mindful interactions occur in and during negotiations.

4. Industrial Deployment of Networked Actors' Residuals

The output expected from related actors' interactions can depend considerably on environmental conditions beyond the publicly visible, for example based on hidden infrastructure properties, social behaviour or economic constraints. Common pitfalls in assessing network stability might include the reachability of peripheral nodes with standardized means, as the availability of this option could depend on ecosystem health and long-time resilience of structures.

During the early phases of value co-creation, residual outcomes of interactions might be subject to information asymmetry by parts of a network. If this information is faulty by design – albeit unintended – due to incompatibility of interacting elements, unintended residual value might need to be de-risked and mitigated. The result, however, could be even more value promising to recipients, as the audience would potentially perceive positive rather than negative network externalities and their consequences. The cost factor until such a state can be achieved may be considerably higher in the beginning, but provide in medium- and long-term outlooks with much higher profitability when avoiding bullwhip effects in global value chains.

Although individual industries might follow distinct practices in their manageriability, commonalities are most certainly derived through cross-thematic comparison of operational and cultural factors, leading to a diplomatic navigation capability in uncertainty (Padmore, 1998). Depending on the openness, control and generativity of networked value flows to capturing mechanisms of such, residual effects may or may not be to an actors' perceived favour within a system of changing agents (Padmore, 1998). Whether this can be addressed by adjustments of node and graph properties, or by

establishing novel network alternatives depends to an extent on political and financial circumstances, whose success expectation might be even more unclear (Weiss, 2021).

The capability to using and applying, if not incrementally renewing and improving resting network structures can be of utmost importance for redundant and secure planning scenarios regardless the industry (Williamson, 2010). Constant input necessities to maintain this option, however, leads to an overhead level that should not be underestimated, although modern technologies could help to reduce economic burden. Overall deployment of value potential is thus prone to volatility based on environmental conditions of an ecosystem.

5. Systemic Considerations in Networks with Value

For big picture innovation and development across natural geographical boundaries, administrations and tradjected wealth stocks, understanding systemic requirements and keeping sensitivity with information flows are fundamental for maintaining sovereign desires. Nowadays, a not to underestimated response seems the trend to home-sourcing and even reshoring of previously outsourced and globalized production and value generation potential, which might harmonize localized societal and industrial conditions. Disruptive events and potential shocks to a system might then be absorbed less obviously for every actors' attention, thus avoiding much heated situations and discussions within an economy (Li & Garnsey, 2014).

Equally, the complexity arising from much anticipated scenarios due to their signalling effects could do more harm to a social and local environment than commonly expected. Being able to providing alternative solutions for network actors might stabilize their perception on the geoeconomic steady-state, rather than continuously adjusting influencing factors of a singular value proposition. The optimal result does not necessarily differ much, but a peaceful thinking in this regard allows for the expansion of actors interests beyond originally envisaged pathways, which might lead to an even higher likelihood of success for the former cause of negotiation.

When having the choice between disruptive or consolidating innovative activities, time horizon, values, and feasibility of endeavors play important roles of consideration for actors' behaviours, which could alter systemic characteristics considerably – or not. Only mutual trust and reduced uncertainty allow for functioning exchange of information and flows of value via channels already in place uninterrupted. A systematic approach to advancing on matters of interest therefore relies in parts on support structures already in place, rather than a built-up in the spur of a moment (Figure 4). The acceptance by other networked participants promises to being more responsive in this mission-oriented case.

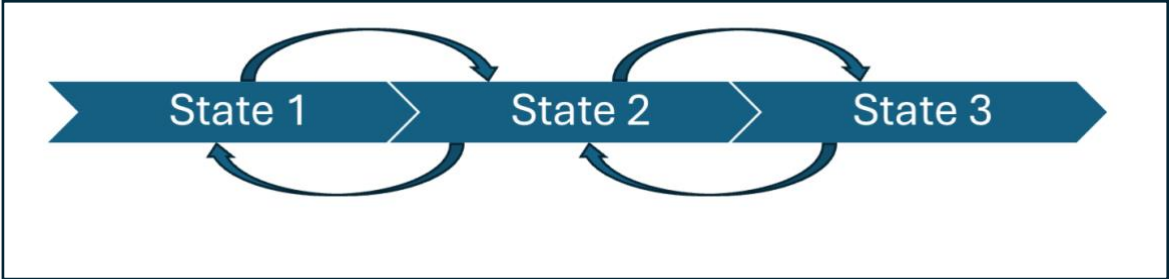


Figure 4: Geoeconomic Steady-State Progression

6. Value Networks and Sovereignty

Once aiming to understand the manifold interactions observable in nature, one should not underestimate the complexity of networked constellations of actors enabling value. A value network as derivative form of such has many different facets worth exploring by research, as their shape might be altered according to environmental circumstance. Although participants in these types of networks feel continuous feedback effects by engaging with other nodes, the connectivity determining a magnitude of these changes.

Whilst thoughtful input of resources adapted to localized needs allows for softened alterations of the web, unintended adjustments cannot be excluded if not done so. The value networks are differentiable between horizontal and vertical value distributions depending on the industrial prerequisites and requirements for value-adding steps (Sairanen, Aarikka-Stenroos, & Kaipainen, 2024). Capabilities within these – often times siloed – parts of a network build upon the resources deployed and complicate deliberate interactions between designed elements (Ghazawneh & Henfridsson, 2013).

Given the proportionality of evenly or unevenly distributed network graphs, interchangeable value could be hampered and proposes a sovereignty problematic. In this case, sovereignty refers to the ability of a network’s actor node or group to engage with other network actor elements unhampered, freely and intentionally without chaos. Whereas value does not necessarily occur cross-boundary without good will by actors or against their authority, the initial impulse to co-create such relies on fruitful partnership. Walls are thus subject to interests, beliefs, norms, and other cultural dimensions that prevent value exchange to occur within a network – sometimes depending on integration (Parker & Van Alstyne, 2005).

This integration can be dependent on well-balanced signs of mutual understanding for economic benefits, when their associated societal costs are acknowledged but reduced. Detailed track keeping of value flows is often envisaged by decision makers, but in practice time consuming and an administrative burden; albeit sometimes necessary. A special form of partnership scenario foresees more corroborated friendly interactions, in which case administrative burdens on goods and services are limited to symbolic value.

Duality of systems for individual independence of actor groups is thus cost extensive, and their compatibility attempt may impose the need to introduce intermediary functions (Figure 5). Collaboration between sceptical stakeholders is potentially costly but even more rewarding, given a high potential for residual outcomes that is to the best for humanity (Moradlou, 2021). In summary, sovereignty depends on the environment – and ecological variables within. Natural resources unlock capabilities that support this construct considerably well.

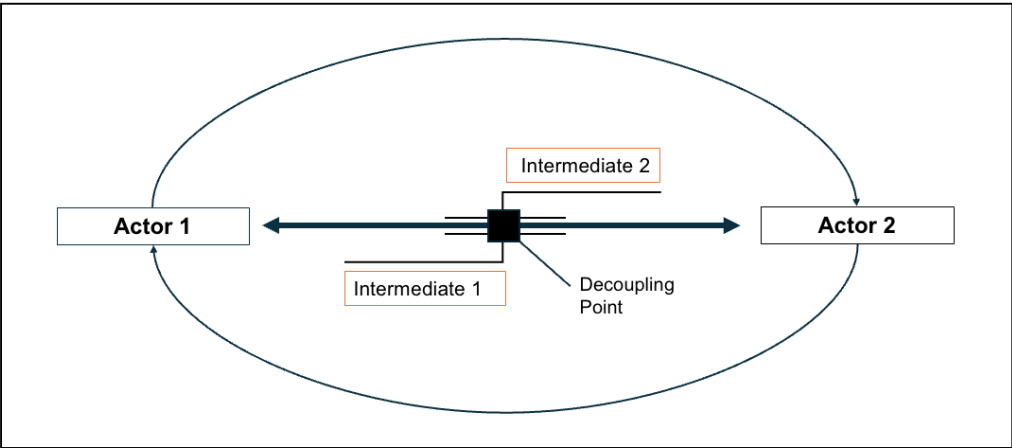


Figure 5: Mediation and Decoupling in Interactions

7. Strategic Redundancy, Resilience & Geopolitical Risk

In the discourse on sovereignty, the aforementioned ecological characteristics have rarely been considered for ecosystems, especially in the economic context in-depth. Self-evolving organisms develop without interference or steering non-directional, despite potential. With guidance and n-lateral support, this evolution could be more plannable (Jütting, 2020). The issue arising is often enough the level of influence that any system might manage to withstand, as cultural behavior may not prevent collapse when misinterpreted regardless. Problematic seems often enough the self-renewing characteristic of communities, when knowledge about situational awareness are not a given any more after evolutionary events (Tranfield, Denyer, & Smart, 2003).

Organizations and individuals have instated specific mechanisms for these instances that allow for a mitigation of costly emergencies by institutions, rules and societal nets often (Dedehayir & Steinert, 2016). A major consideration is redundancy of capital, whether related to intellectual, production or financial resources, which could be strategically built-up by foresighting. Other ideas circle around resilient infrastructure for reduced maintenance requirements, a continuous provision of services for the deployment or development schemes in place (Bailey, Corradini, & De Propris, 2018).

Viewed in combination, this leads to the risk profile of any operation, which could potentially disrupt geopolitical stability by unaligned linkage and thus induce risk to all. Many examples exist that display a justified public interest for these elements of ecosystem governance by design, for the continuation of political and innovative efforts. Production networks often center around the problematic, if their stability in supply and demand is ensured, or whether profitability targets are at risk of losing track globally.

Considering the precarious situation of instable peace across historically repetitive conflict areas, early detection systems of critical impact will helpfully be implemented. Thereby, surprising developments in societal situations are less surprising in diplomatic terms, and the surrounding responding and receiving sensing elements less alarmistic (Edmondson & McManus, 2007). Bullwhips in engineering terms have occasionally the danger of moving entire value networks towards a certain direction, if not to alter their streams of value generation. In the case of high advanced production goods and services,

the in- and output materials are specific and fragile quite seldomly but often enough – tailoring to risk is advised then.

Even if servitization and customization have the possibility to circumvent inertia and emergency likewise, a probabilistic approach to automation and machinery is helpful. At stake is mostly productivity and work in the digital age, and the creativity of humans might suffer from a lack of appreciation for the uncertain and unlikely when negligent (Figure 6).

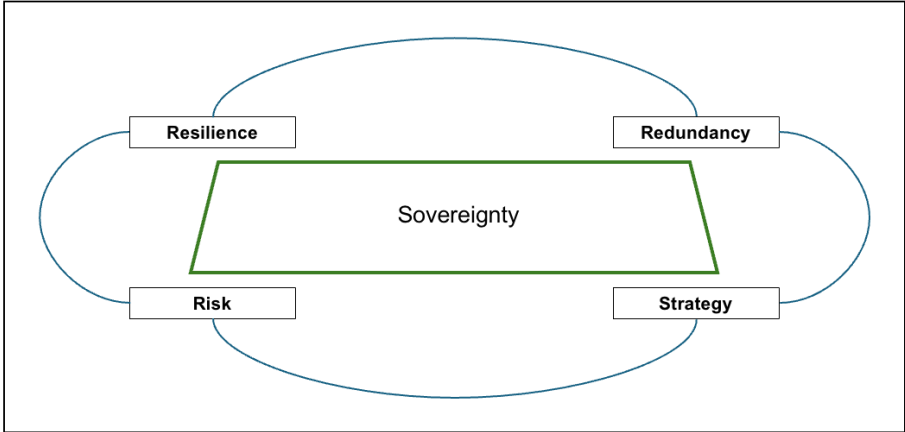


Figure 6: Pillars of Sovereignty in Ecosystem Theory

8. Geoeconomic Consequences of Cross-Boundary Value

Ownership about one’s assets and rights has seldomly be as controversially discussed as in the case of cross-boundary value exchanges, like for transport, energy and edibles. These boundaries – by authorities often classified as borders – could be of geographical characteristic, administrative form, or legal shape, with differences in enforcement. An inference from these societally determined variables is the idea of geo-economic rivalry (if not competition) for value treasured in goods and distributed via services. At the same time, however, any such spatially alternating business conduct, including trade and investment, is dependent on mutual understanding for value upcycling (De Marchi & Alford, 2022).

Value flows across boundaries can occur via unilateral, bilateral or multilateral constellations of actors within supra-hierarchical customs constructs of polities. Despite many stakeholders envisage trusted relationships with their counterparts, rules need to be obeyed in interactions between heterogeneous principals and their agents. Arbitrage

is seldomly preferred, but may be derived from friction in systemic differences due to cultural and norms-based belief conflicts resulting in equally reluctant behavior.

Brokerage of interest in these cases is not seldomly obliged to influential but informal settings driven by key stakeholders in policy arenas, who aim to be impartial and just. If these are institutionalized and evoked in panregional settings, their contribution to agenda-setting and formalized value networks cannot be underestimated but respected (Eilstrup-Sangiovanni, 2022).

In codified cases, international organizations manage these interactions autonomously for their field of interest, whilst being accepted in their existence by a certain community. Critics of this concept might argue that spheres of influence rely on reinforcement attempts rather than iterative consolidation of economic power, dependent on intent. Their voice of influence outside of regulated environments differs from education to scientific background of value network participants and their susceptibility to pleas (Aarikka-Stenroos & Ritala, 2017).

Value streams along network graphs need protection against inference if deemed vulnerable to malicious interest out of political or economic reasons not only when used. The disruption of such even in conditions of relative stability is to avoid for competition fairness and a maintained level-playing field for economic independence of actors will (Gray, 2021). Should an interdependence across value boundaries continue to exist over an extended period of consolidation, the effects mirror symbiotic to synergetic states of interactions (Figure 7). Qualifications for solidified value exchange are then derived implicit or explicit via reporting mechanisms that are supplementary to validated jurisdictional expectation.

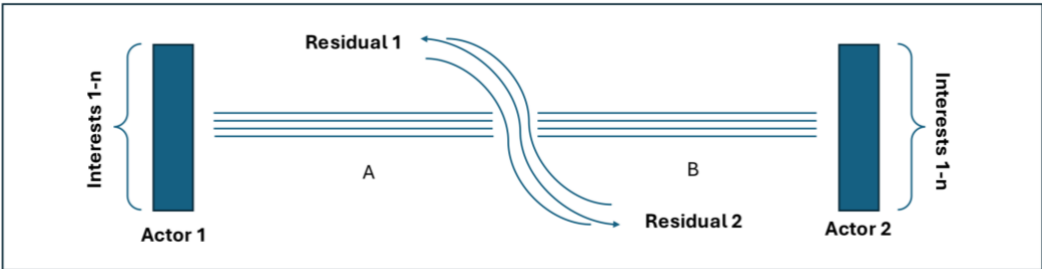


Figure 7: Transposition of Interests with Residuals

9. Discussion

In the fundamental conversations about sovereignty aspects, the membraneous effects of boundaries have not yet been sufficiently investigated due to separation problematics (Anderson, Reid, & Beaton, 1972). For instance, walls describe the borders between premises, oftenly however funneled through via narrow pathways that allow for mutual exchanges in priorily defined settings. Falling for fine interaction is thus most concerningly and from time-to-time only possible should dedicated environmental variables also be formed favorably to further frank acts. The result is continuous improvement of theme-related outcome potential in times of crisis, conflict, but also prosperity or peace. If frequent exchange occurs, value is shaped (Figure 8).

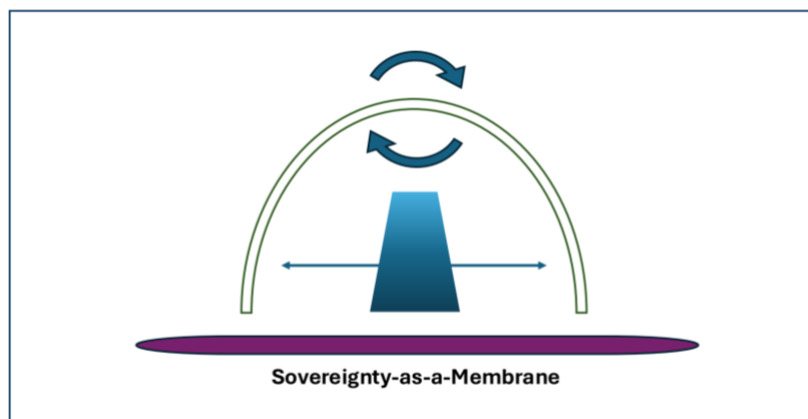


Figure 8: Membraneous Schematic of Sovereignty

Unexpedited characteristics of sovereignty comprise the idea of vertical and horizontal integration in partnership constellation and the boundaries prevalent within in daily terms (Clarysse, 2014). Communities are construct vehicles that provide explanation to societal phenomena, based on which groups of individuals react collectively albeit with individual intentions. Entertainment elements of in-between collaborations of divergent stakeholder circles become more difficult in its core, should peer-group effects prevent from economic trade (Fleming & Frenken, 2007).

Clusters emerge in pre-set versions of measured time and space, if the development of interaction potentials are bound by circumventing borders that confine gatherings closely. If these grouped value-generating communities with shared value proposition are connected in a networked manner, hub-and-spoke systems are born for extended reach. Connectivity is restrained by self-containment, if exchange is high in transaction costs, and requires constant consideration of information flow within or among units of analysis.

Marginal cost of any such exchange is described by tangible or intangible cost, ranging from financial to emotional factors of addressing a problematic in a root-cause enough. Mechanics and means for information flow differ only slightly, should complementary goods and services facilitate accelerating value co-creation and equally capturing such. Repetition of these kinds of interactions is often disappointing due to previous knowledge of similar situations, and the identified characteristics of the item at stake and at proof.

Continuity of network externalities is thus dependent on environmental standards, their properties and functions, as well as the acceptance of possible disappointment in trust. Revision of network actors' favorable positioning is therefore advisable in situations, when prior contact has been established some whiles ago and could not persist over time.

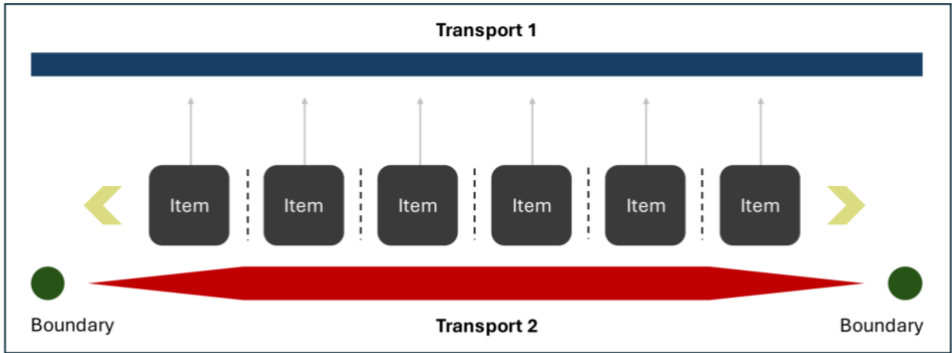


Figure 9: Transportation of Value across Boundaries

Transport of value thus consists of multiple elements that need to interact with each other in a chain of events, described by pendular motions of progress in any one matter distinct. The itemized bit of information that is stored within a network element therefore defines the node modality and heaviness of connectors in terms of their trust building capability (Figure 9). Consequences of actions sometimes rely on the capability of actors to identify malfunctioning and wrongdoing with easy means based on soft interventions by nodes.

Reported value effects that spill-over boundaries are not seldomly confined to an accuracy of value documenting tools to their understanding if in use by interested parties (Clements, Lan, & Seah, 2012). Value transmission and generation could therefore be peripheral and spatially distributed possible, but most oftenly related to dedicated value propositions within set structures. Scientific advice has to take surprising events and their potential spin into account, given possible interruptions to progression of tasks when working in networked environments.

10. Conclusion

Distributed value refers to the capability of actors to conduct their activities spatially and time wise relatively efficient regardless their origin or base of work and business. Influence to a system is thereby measured by the appearance and reach for one's interests on a matter, whether the perceived objective is being addressed actively or not. Keystones possess the ability to situational judgement for highlighted circumstances by network evolutions via dynamic capabilities, such as sensing, seizing and interacting.

Occasionally, early detection signs point towards the need for increased awareness and respect for events that are unexpected, unlikely and potentially unfair for progression. However, every such coincidence bears the potential for something more unbelievable for success, first only hoped, then assumed, later expected, and finally experienced. The underlying mentality requires perseverance, attention to detail, and continuous improvement – not procrastination, which could wrongly be equaled with reluctance.

Instead, actors might await windows for opportunity for interaction, positivity, spirit, and coordination of furthering network evolution by chance and design when reasoning (Hu, Tian, Wu, & Yang, 2021). The impact is often visible: wellbeing, news, publication of results. The intent remains obscured though, if not questioned wisely by knowledgeable counterparts occasionally. Reminders of value network adjustments or their residuals might continue to strive independently from original thought, which allows for progression of economy softly. Thereby, a community and its society experience unexpected prosperity by communal understanding signed with mutual friendship, acceptance, and seriousness of co-working by acknowledging sovereignty of ecosystem actor nodes.

Bibliography

- Aarikka-Stenroos, L., & Ritala, P. (2017). Network Management in the Era of Ecosystems: Systematic Review and Management Framework. *Industrial Marketing Management*, 67, 23-36.
- Anderson, T.W., Reid, D.B.W. & Beaton, G.H. (1972). Vitamin C and the Common Cold: A Double-Blind Trial. *Canadian Medical Association Journal*, 107(6), 503-508.
- Aroles, J., Mitev, N. & de Vaujany, F.X. (2019). Mapping Themes in the Study of New Work Practices. *New Technology, Work and Employment*, 34(3), 285-299.
- Bailey, D., Corradini, C., & De Propris, L. (2018). 'Home-Sourcing' and Closer Value Chains in Mature Economies: The Case of Spanish Manufacturing. *Cambridge Journal of Economics*, 42(6), 1567-1584.
- Baskerville, R.L., & Wood-Harper, A.T. (1996). A Critical Perspective on Action Research as a Method for Information Systems Research. *Journal of Information Technology*, 11, 235-24.
- Clarysse, B et al. (2014). Creating Value in Ecosystems: Crossing the Chasm between Knowledge and Business Ecosystems. *Research Policy*, 43(7), 1164-1176.
- Clements, KW, Lan, Y & Seah, SP (2012). The Big Mac Index Two Decades On: An Evaluation of Burgernomics. *International Journal of Finance & Economics*, 17(1), 31-60.
- De Marchi, V., & Alford, M. (2022). State Policies and Upgrading in Global Value Chains: A Systematic Literature Review. *Journal of International Business Policy*, 5(1), 88-111.
- Dedehayir, O., & Steinert, M. (2016). The Hype Cycle Model: A Review and Future Directions. *Technological Forecasting and Social Change*, 108, 28-41.
- Edmondson, A. C., & McManus, S. E. (2007). Methodological Fit in Management Field Research. *Academy of Management Review*, 32(4), 1246-1264.
- Eilstrup-Sangiovanni, M. (2022). Ordering Global Governance Complexes: The Evolution of the Governance Complex for International Civil Aviation. *The Review of International Organizations*, 17(2), 293-322.
- Fleming, L & Frenken, K (2007). The Evolution of Inventor Networks in the Silicon Valley and Boston Regions. *Advances in Complex Systems*, 10(01), 53-71.
- Floetgen, RJ et al. (2021). Connecting the Dots of Digital Platform Ecosystem Research: Constructs, Causal Links and Future Research. In *ECIS 2021 Research Papers*, A Virtual AIS Conference.
- Li, J. F., & Garnsey, E. (2014). Policy-Driven Ecosystems for New Vaccine Development, *Technovation*, 34(12), 762-772.
- Ghazawneh, A., & Henfridsson, O. (2013). Balancing Platform Control and External Contribution in Third-Party Development: The Boundary Resources Model. *Information Systems Journal*, 23(2), 173-192.
- Gray, J. E. (2021). The Geopolitics of "Platforms": The TikTok Challenge. *Internet Policy Review*, 10(2), 1-26.
- Hu, Y., Tian, K., Wu, T., & Yang, C. (2021). The Lose-Lose Consequence: Assessing US-China Trade Decoupling through the Lens of Global Value Chains. *Management and Organization Review*, 17(2), 429-446.
- Jaakkola, E., & Aarikka-Stenroos, L. (2019). Customer Referencing as Business Actor Engagement Behavior – Creating Value in and beyond Triadic Settings. *Industrial Marketing Management*, 80, 27-42.

- Jütting, M. (2020). Exploring Mission-Oriented Innovation Ecosystems for Sustainability: Towards a Literature-Based Typology. *Sustainability*, 12(16), 6677.
- Kergroach, S. (2019). National Innovation Policies for Technology Upgrading through GVCs: A Cross-Country Comparison. *Technological Forecasting and Social Change*, 145, 258-272.
- Kretschmer, T., Leiponen, A., Schilling, M., & Vasudeva, G. (2022). Platform Ecosystems as Meta-Organizations: Implications for Platform Strategies. *Strategic Management Journal*, 43(3), 405-424.
- Lungu, S. (2004). Power, Techno-Economics, and Transatlantic Relations in 1987–1999: The Case of Airbus Industrie and Galileo. *Comparative Strategy*, 23(4-5), 369-389.
- Manson, S. M. (2001). Simplifying Complexity: A Review of Complexity Theory. *Geoforum*, 32(3), 405-414.
- Moradlou, H., Reefke, H., Skipworth, H., & Roscoe, S. (2021). Geopolitical Disruptions and the Manufacturing Location Decision in Multinational Company Supply Chains: A Delphi Study on Brexit. *International Journal of Operations & Production Management*, 41(2), 102-130.
- Niederman, F. & March, S. (2019). The “Theoretical Lens” Concept: We All Know What It Means, But Do We All Know the Same Thing?. *Communications of the Association for Information Systems*, 44(1), 1.
- Padmore, T., Schuetze, H., & Gibson, H. (1998). Modeling Systems of Innovation: An Enterprise-Centered View. *Research Policy*, 26(6), 605-624.
- Padmore, T., & Gibson, H. (1998). Modelling Systems of Innovation: II. A Framework for Industrial Cluster Analysis in Regions. *Research Policy*, 26(6), 625-641.
- Parker, G. G., & Van Alstyne, M. W. (2005). Two-Sided Network Effects: A Theory of Information Product Design. *Management Science*, 51(10), 1494-1504.
- Rusthollkarhu, S., Hautamaki, P., & Aarikka-Stenroos, L. (2020). Value (Co-) Creation in B2B Sales Ecosystems. *Journal of Business & Industrial Marketing*, 36(4), 590-598.
- Sairanen, M., Aarikka-Stenroos, L., & Kaipainen, J. (2024). Customer-Perceived Value in the Circular Economy: A Multidimensional Framework. *Industrial Marketing Management*, 117, 321-343.
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review. *British Journal of Management*, 14(3), 207-222.
- Weiss, L. (2021). Re-Emergence of Great Power Conflict and US Economic Statecraft. *World Trade Review*, 20(2), 152-168.
- Williamson, O. E. (2010). Transaction Cost Economics: The Natural Progression. *American Economic Review*, 100(3), 673-690.