

Sociology of Digital Communities: Bridging the Gap between Theories of “Internet Spectatorship” and “Rule System Theory”

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Abstract. Social life is regulated by rules. The order of norms regulating human behavior is considered as the central aspect of society by various scholars. Durkheim considered ‘social fact’ primarily in normative terms. Here in this paper we try to explore the relationship between theories of ‘axionormative’ order worked out by Tom Burns and his group broadly under evasion of rules and theories of internet spectatorship. The relevance of these theories to the emerging discipline of Sociology of Digital Communities is discussed.

Broadly, normative changes refer to the replacement or modification of one or more components of the normative structure: norms, values, roles, institutions, institutional complexes. The change of established norms from one state to another is a normative deviation leading to normative morphogenesis. One of the ways through which normative morphogenesis occurs is via norm evasion. There are various mechanisms through which norm evasion occurs at a societal level. One such modality is norm substitution. This primarily occurs when old norms remain in force but evasion occurs because of the magnitude of its scale and occurrence.

In the contemporary era, self imagery plays a crucial role in the axionormative order of the society. The quest for a homophilic search among digital communities has been pointed out by a few scholars. In this context digital content and internet has become a site for structural elaboration through modalities of spectatorship. Based on our field interaction with different actors involved in the use of an ICT facilitated Knowledge architecture in the agricultural domain, we argue that the process involved in the structuration of digital communities involves principles of normative evasion based on certain rule systems of digital communities. The structural elaboration principles that are likely to set up an emergent ‘digital communities rule system’ are mediated both through the observational power of the spectator (internet spectatorship) and knowledgeability of the agents.

Key words: Sociology of Digital Communities, Rule System, Morphogenesis, Internet Spectatorship, DEAL

1 Introduction

The Internet engages users in cognitively effortful tasks and provides experiences and challenges in ways different from conventional mass media (Newhagen and Rafaeli, 1996). Internet produces spectatorial positions which are rendered through images, different media forms and computer technology. Spectatorial positions suggest that user as a spectator has a high level of agency when engaging with the internet setting. However it is social forces as well as organizing influences of representations and interfaces that create spectators and ascribes observational power to the spectator (White, 2006).

Social life is regulated essentially by norms. Durkheim conceived social facts in normative terms (Durkheim, 1972). Similar normative emphasis on social life was highlighted by Florian Znaniecki in his ‘axionormative order’. According to him ‘social order in this view denotes simply axionormative order among phenomena called social . . . The social organization is founded on collectively recognized and supported norms which regulate not only actions but experiences and representations of its members (Znaniecki, 1971). Recently Tom Burns and his group have developed a comprehensive theory of rule systems and rule regimes to highlight the importance of social norm and their key position in social life. According to them rule systems are major objects of social transformation (Burns 1987, 1992).

In this paper our aim is to provide a theoretical understanding of the adoption of ICT based on the works of Tom Burns and theories of internet spectatorship in the context of Digital Ecosystem for Agriculture and livelihood web portal (DEAL project) developed by the OPAALS group at IIT Kanpur.

2 Theories of Internet Spectatorship

Contemporary digital technology encourages actors to interact, find community, and identify with representations that 'live' within the internet 'space'. Spectatorship affects how settings and interfaces are understood and helps to shape larger conceptions of self and normative structures. An active and empowered internet 'user' is one who is in control of the interface (White, 2006).

It is argued that spectatorial web sites aim to address particular kinds of internet and computer spectators by suggesting what they resemble. These renderings of images indicate the kind of representation and spectatorial positions to be produced by internet and computer technologies (White, 2006; Mayne, 1993). Spectatorship indicates that different forms of media are 'culturally significant events'. It is suggested that a failure to provide aesthetic validation result in 'usership' that has no significant experience and can invite the spectator to critically look at technology, reproduce power discrepancies (Mulvey, 1975; Hartsock, 1990).

2.1 Defining the Term Spectator

Employing the term 'spectator' when considering internet and computer settings indicates how individuals look at representations and/or are acknowledged or displaced by visual and textual addresses. The term involves gaining an understanding of the setting and relates to user experiences through narratives and renderings. However spectatorial positions do not exactly describe the experience of any individual, rather it suggests how the viewers are addressed and shaped by media forms. Spectatorship indicates the processes of watching and listening, identification with the representational schemas; textual or pictorial, the various values with which viewing is invested. Nevertheless, the spectator is subjected to the power of another vision and assumes positions with significant cultural ramifications when viewing internet sites, reading, and listening. In Internet and computer viewing, the forms of spectatorship articulated by the technologies and representations are constantly acted out by using the system (White, 2006).

2.2 Reproduction Strategies to Mediate the Self

By and large human efforts to make sense of self and the world are dominated by ideological forces that are oriented towards individual goals. At the same time, particular forms of thinking and action also reveal volitions and genuine motivation beyond the confines of existing social forces. Human beings are initiated into language communities where women and men share bodies of knowledge, epistemologies and the cognitive styles that accompany them. These forces shape understanding of the self and consciousness about who we are. Thus, the manner in which one come to think about education and knowledge production is based on discursive communities. Socio-historical dimensions of self-production are naturally manifested on the terrain of discourses. In very specific terms a critical epistemology is profoundly concerned with the production of self in the context of the influence of power blocs in contemporary society. Such concern reveals itself in a critical questioning of the social, cultural, political, economic, and linguistic structures that shape human consciousness as well as the historical contexts that gave birth to the structures (Kincheloe, 2008).

3 Norms and Normative Changes

In general norms refer to institutionalization of certain rules and normative change implies the emergence, replacement or modification of components of normative structure. Any change in the established norm requires normative deviation. Merton in his work distinguishes between two forms of deviance: (a) non conforming behavior and (b) aberrant behavior (Merton, 1982). Both vary widely in terms of the mechanisms of operation and changes they bring to the social system. Thus non-conforming and aberrant behavior initiates two different paths of normative morphogenesis with different stages and internal mechanisms; one through morphogenesis via normative innovation, and the other through morphogenesis via norm evasion. In this paper we will focus on the first aspect of normative changes. Normative innovation is a subtype of normative emergence where a new additional

level of norm appears requiring its institutionalization. Normative innovation starts with some acts of human creativity and dissent from existing traditions. By nature such acts are exceptional, and occurring only among a selected few societal members. There is a considerable gap between initiation of an innovation, and the time it becomes finally accepted and replaces old rule systems (Coleman et al., 1966). In the beginning the innovation may remain private and attempt to popularize it may fail. In the sub-sequential stages in an evolutionary process it becomes wide spread. Yet this does not mean that they immediately become socially meaningful or consequential. At this stage various social filtering mechanisms may block the innovation. However as Merton puts it “A certain degree of “innovation,” for example, may result in the formation of new institutionalized patterns of behavior which are more adaptive than the old in making realization of primary goals(Merton, 1968). This paves the way for the innovation to break through the filtering mechanisms and reach wider society. With regular and repeatable characteristics, the innovation gets its legitimacy and opens the path for normative morphogenesis through the process of institutionalization of new norms. Institutionalization of norms at this stage can follow its own path. The success of institutionalization of the innovation leads to the final phase of the morphogenetic process where new norms attain the status of sanctioned norms.

4 Tom R. Burns and Rule System Theory

Fundamentally rule system theory is a continuing tradition in the understanding of social change through the principles of normative changes. Following the tradition Burns and his group suggests that social organizations, communities, networks and societies are in a state of normative morphogenesis which they refer to as transformation of rule regimes¹. They argue that actors themselves are actively involved in these processes to determine which regime or regimes are to govern a sphere of activity or social process. Agents with vested interests struggle to maintain established systems or to limit changes in them. Others, often with diverse motives, engage covertly or openly in modifying or transforming the systems. However, even in periods of radical change, they never start from scratch. Their point of departure is always an on-going socio-cultural system in which they are embedded. **They evolve a future through praxis.**² A similar view has been expressed by earlier researchers (Brown and Duguid, 2001) that the paradox of stocks and flows in knowledge networks can be resolved through social practice.

Social interaction takes place in settings usually with more or less established social rule systems defining agents’ rights knowledgability and access to resources. The structural conditioning of social action and interaction also depends on physical circumstances, which make for a given resource availability and the shaping of action constraints as well as opportunities. Morphogenesis of rule regimes is thus conditioned both by the structure and agential coefficients. It occurs when new rules of an innovative framework are practiced on a large scale by the actors in a given social context (Burns, 1987). In the contemporary world, digital technology plays a crucial role in social life. In the following sections, we elaborate on the morphogenesis of rule regimes through discourses of internet spectatorship and our observations from the DEAL project. Before that let us describe on theories of internet spectatorship.

5 The DEAL Project

The DEAL (Digital Ecosystem for Agriculture and Livelihood) project is a step towards technology enhanced agricultural extension intervention in a DE (Digital Ecosystem)³ framework. DEAL is an ICT (Information and Communication Technology) enhanced network built on an existing framework of tele-centers in rural institutes, village schools, KVKs (Krishi Vigyan Kendras - Agriculture Science Centers) and other deployment partners. The project aims to create a digital knowledge base by involving the various actors in the existing system in the content creation process and making this knowledge accessible to farmers and other agricultural practitioners. The entire process of content

¹ The term rule regime refers to authoritative, backed by social sanctions and networks of power. They have an objective external quality in human understanding.

² **Praxis is the place where theory meets the action. In other words is it accepted practice for human activity.**

³ A digital ecosystem for the digital ecosystem is a digital environment populated by digital species consisting of software components, applications, online services, information, business models, users, etc having characteristics of biological ecosystem.

creation and dissemination is capable of self generation, node independence and self-sustainability using an electronic medium. The moderating node in this system is IITK, which provides the collaboration and collation technology platform, skills and resources to assist knowledge flows through the network.

Field deployment of the DEAL project was between December 2005 and June 2007. Following this, we conducted a study among the participating KVKs in October 2007 to assess the impact of DEAL on agricultural extension. The narratives used in this paper are taken from the data collected through our field visits during that period to five participating KVKs, and the DEAL. The data used in the present study were collected through personal interviews with the help of an unstructured interview schedule and focus group discussions. The KVK scientists (31 in number) were interviewed at their respective KVKs.

6 Contextualizing the Theory and the Problem

6.1 Context 1 – Internet Spectatorship and Lessons from the DEAL

The DEAL portal, aimed at providing agricultural information services shows the subjects in the form of farmers, agricultural land, tools and live stock and suggests authority, coherence, control, and engagement.⁴ A ‘welcome’ messages and links that are labeled English or Hindi at the main page of the DEAL portal suggests that there is a way for the spectator to get into the setting based on his/her knowledgability. The image relating to agriculture such as farming fields, farmers and agricultural products perpetuates the view that there are subjects ‘in’ of within internet ‘space’, and suggests that the spectator has ability to manipulate the technology used in this virtual space.

The visual interface of Kisan Blog at DEAL aims to provide a living environment to the users to look at each other, enter the interface and congregate. For example at the Kisan Blog, spectators log in or start a session with the computer and the portal appears with a welcome text which provides information about the portal and advice on how to engage. The text existing there informs the spectator that Kisan Blog is a new kind of society where many other people across the country voluntarily join. This suggests that viewers become empowered spectators entering into a setting and occupy the internet as a space. Existence of users at the portal which are presented through a list of recent users and commentators suggest that there are ‘others’ existing in the domain who belong to his/her imagery. This satisfies the homophilic⁵ search for self at the portal.

6.2 Context 2 - Rule System Theory and Lessons from the DEAL

Morphogenesis of rule regimes occur when there is a mass erosion of established rules. By practice, the agricultural experts we studied as users of the DEAL portal reside in a rule regime where they are considered as rule-following agents of agricultural extension without having any need for knowledge beyond field requirement. In various top-down mandated centralized information delivery mechanisms in the existing agricultural extension system, thus there is a ‘deskilling epistemology of practice’. Extension agents are told what to do by experts in state/provincial departments/ministries without any evidence that such government mandates will improve the quality of extension services in their specific jurisdictions. The anti-democratic actions of such standardized extension policies threaten the knowledge freedom of extension workers thus reducing their desire to access and use knowledge available through internet. Although this threat is an unintended side effect of such strategies but is a celebrated tactic of dominant power’s goal to maintain the rule regime. According to an agricultural expert we studied⁶:

⁴ The DEAL portal uses various strategies through the use of multiple media to look up the subject. Examples of this are the use of ‘grid interface’, ‘Kisan Blog’ and various images and video tapes presented at the portal.

⁵ The quest for a homophily by the internet users has been highlighted by a few scholars. The term hemophilic search suggests that users prefer to see their own reproduction at internet sites. For further details refer to Peter R. Monge and Noshir S. Contractor (2003) Theories of Communication Networks. New York: Oxford University Press.

⁶ All the narrations were translated by the authors to English based on responses in Hindi.

The duty of an agricultural expert at KVK is field based. All the mandates are designed by ICAR (Indian Council for Agricultural Research)⁷. Primarily we depend on the ICAR for training, information delivery, and access. My participation in the DEAL project was started through our ZCU (Zonal Coordination Unit)⁸ at Kanpur. There was little interest of mine as this was not a structured mandate of ICAR.

Under such structural arrangements changes in any rule regime requires both a spectatorial display of the object to be adopted and practiced by the agents in the domain as well as elaborative principles to facilitate the process. The DEAL used both the tactics to create a new rule regime. The first issue was addressed by developing easy navigating and operational features in the portal. The second was employed by providing additional material and training supports. According to a respondent:

At the time DEAL was implemented at our KVK we did not have a computer with us. The computer we currently have is provided by IIT Kanpur. At the beginning the proposal was to provide content to the DEAL team for digitization at their laboratory. But going to IIT to give content was a difficult task for us. I asked some of my colleagues to do the same. They also expressed similar problems I informed my difficulties to DEAL. They then provided an agricultural scientist for us to collect text based information from us to digitize. . . . In the beginning, I myself had little belief on the success of the digital content. Until September of 2006 we had little experience of the website and the project. During that time they proposed to install the digital content at our KVK. Once the computer came to us some of my colleagues started showing interest in the use of the portal project. What I liked most is the gird interface. It provides an easily searchable way for digital content. The Kisan Blog is another interesting feature of the portal. I feel happy when I see names of farmers and other experts at the Kisan Blog posting questions and providing answers.

6.3 Context 3 – Bridging the Gap between Rule System Theory and Internet Spectatorship Observations from DEAL

It is difficult to say that the DEAL portal has really resulted in the morphogenesis of the rule regime. However there are few indications which suggest that it has to some extent enabled the process for mass adoption of the digital content in agricultural domain. According to an agricultural scientist:

My participation in the DEAL project comes through our training organizer. At that time I and some of my colleagues did not like the idea at all and thought that it was both a waste of time and energy. But I started using the digital content, one day while I was going through the portal, one of the lead farmers of the locality visited us. He found the portal quite interesting and showed interest to use the content available at the portal. His interest in the portal also encouraged me to actively participate in the project. The next task was for me to learn a few procedures relating to digitizing the content. The agricultural expert of the DEAL at our KVK has given me some training. At present the PC is in the room of the training organizer. I have limited chance to use it. One of the best experiences for me was to participate in the audio blog. During the month of October the DEAL agricultural expert told me that they have developed an audio blog where farmers can put the queries in audio format and experts can give answers to them in similar way. This was really very fascinating for me. When I saw my name and other scientists name in the portal it provided me a sense of satisfaction that “I and my friends are there”. When people saw my name at the portal they asked me about it. . . . Currently all of us here use the audio blog.

The narratives presented here suggest that there exists a relationship between spectatorial positions, self, immediate environment and morphogenesis of rule regimes. Morphogenesis is a final resultant of the struggle with choice selection and beginning the participation for considerable time through a continuous process of internet spectatorship. Internal mechanisms of internet spectatorship include the

⁷ ICAR is an autonomous national organization set up by the government of India to conduct and promote research and training in the field of agriculture and allied sciences.

⁸ ZCU is zonal a coordinating unit of ICAR , which facilitates frontline transfer of technology programmes by establishing strong linkages with State Agricultural Universities, ICAR institutes, line departments and voluntary organizations in the zone. It is also responsible for developing, monitoring, and evaluating the works of the KVKs in the zone. The stated ZCU in this paper refers to ZCU IV of ICAR.

immediate material and ideological environment, the users comfort level with technology, opinions around the use of technology, social taboos and constraints, and the ways in which participants are socially judged.

6.4 Context 4 – Emerging Networks of Practices in the Context of Rule Systems and Internet Spectatorship

Literature in knowledge management and communities of practices suggest that normally people in structured Communities of Practice come from background having shared knowledge or shared belief system. In these kinds of structural arrangements often people gets benefit of the facility that is available through structural resources and positions. In contrast to it on the other hand information and communication can build a different kind of network (i.e., a network of practice) by challenging the established rule systems and structural elaborations (Baalen, Bloemhof-Ruwaard, and Heck, 2005). A knowledge portal such as DEAL under these conditions bridges the structural holes and contributes to the emergence of a network of practice.

Our study shows that in a pre DEAL scenario, in the absence of proper channel most of the scientist of the KVK operated in isolation and hardly had any opportunity to gain the information and knowledge about other scientist working in his/her area in another KVK even at the local level. For example in the KVK at Dhaura all the scientists shared reciprocal relationships with an expert of Horticulture as he was the administrative head of the KVK. But on the other hand many individual scientists operated with minimal links with others (Figure 1). Particularly the expert of Livestock Husbandry and Home Science operated in isolation where as the Agronomist, Plant Protectionist, Farm Manager and Soil Scientist had unitary information sharing. Further more individual scientists at the KVK hardly have any opportunity to share information with other scientists at another KVK. These forms of sparse relationships fail to meet the present context of rapid changes that affect agriculture. The lack of reciprocity among experts of different KVKs reflects the current top-down approach of information dissemination in agricultural extension in India. Studies in network architectures suggest that centralized networks are ineffective modes of interaction for information sharing. In contrast to it a participatory bottom-up approach allows information sharing and communication more effectively (Fahey and Prusak, 1998; Markus 2001; Kwok, and Gao 2004; Monge and Contractor, 2003). DEAL as a socio-technical mediator facilitates the bottom up approach for knowledge sharing to the people form different organizations (Pattanaik, Chatterjee and Sarkar, 2008).

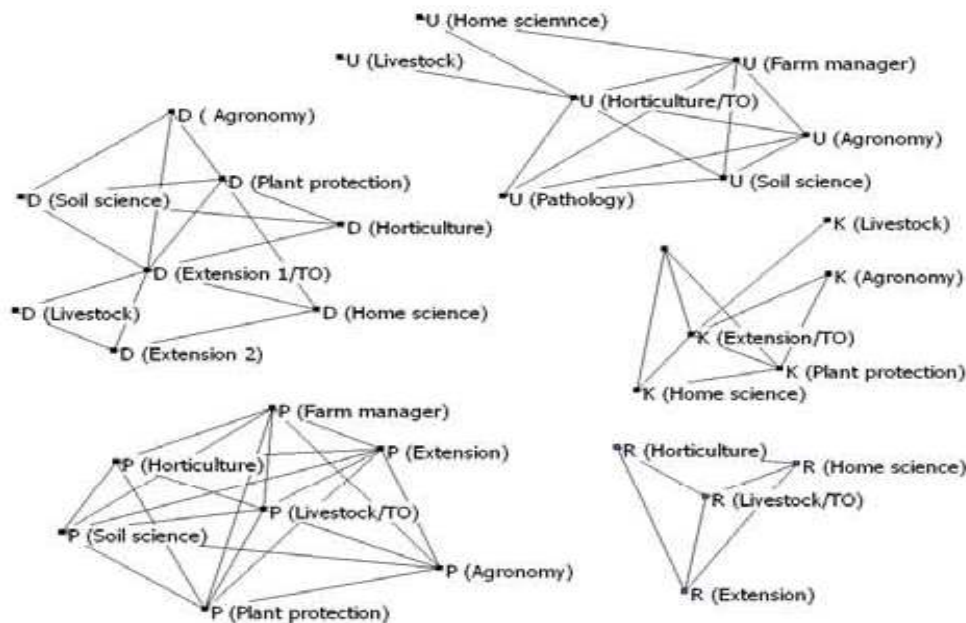


Figure 1 – Network in Pre DEAL Scenario.

Figure 2 shows the emergence of a network of practice in a post DEAL scenario. There is a significant increase in information sharing/flow among domain experts of different KVKs among both within the groups and between groups. The most isolated nodes (domain experts of Livestock Husbandry and Home Science) of pre DEAL scenario are closed knitted a network of relationships with other domain experts beyond their own KVKs. This has been done by creating a platform for different KVKs to share their extension experiences with each other through their interconnected web based knowledge repositories

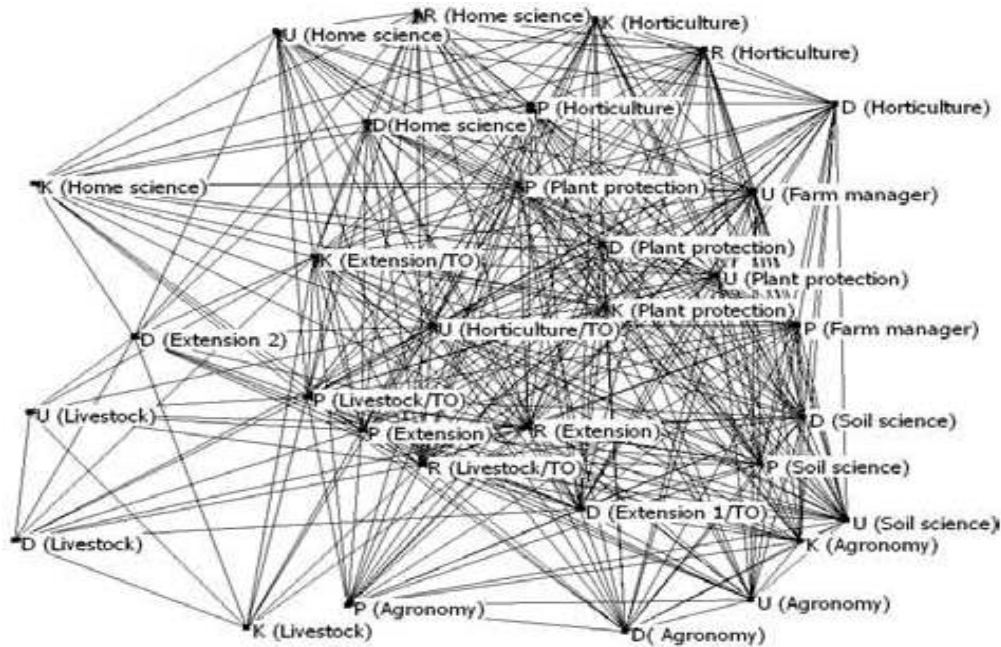


Figure 2 – Network of Practice in Post DEAL Scenario.

Note: D – KVK Daleep Nagar K – KVK Kanauj P – KVK Pratapgarh R – KVK Raibareilly U – KVK Unnao
 Terms in the bracket indicates designation or subject area specialization of the scientists.

The emergence of network of practices occurs through two modes of structure building: (a) internet spectatorship (b) structural conditioning i.e., emergence of a network of practice. The DEAL in this case provides a double conditioned mode of freedom to the actors; freedom to and freedom from. In terms of ‘freedom to’ the DEAL gives the actors ample space to act in a digital technology facilitated architecture by providing multiple opportunities through spectatorial positions and “freedom from” constraints by bridging the structural holes and challenging the established rule systems.

7. A Framework Linking Morphogenesis of Rule Regimes and Internet Spectatorship

Our aim in this paper was to present a theoretical frame work based on theories of internet spectorship and the works of Burns and his group for the emerging discipline of Sociology of Digital Communities. A suggested model for the framework is presented in the Figure 3.

Digital communities are networked communities at a virtual space holding social characters. By nature of their formation digital communities are considered as innovative and deviant. The structuring of digital communities occurs through existing power structure, socialization and strategic structuring. The existing power structure determines the pattern of networking; resource use restructuring of the digital community.

However, as discussed in the paper, formation of a digital community largely depends on physical digital ecosystem resources available to the agents. The relationship between physical digital ecosystem and digital communities are reflexive in nature, i.e., one shapes the other through principles

of physical ecosystem structuring. This implies that as more physical digital ecosystems become available the digital community starts expanding and vice versa.

The morphogenesis of an existing rule regime to an emerging digital communities rule system largely depends on the structural elaboration principles with the context. In this context the principle is regulated by the spectatorial positions and power which is generated through internet viewing. However, one cannot deny the importance of the formal and informal structuring conditions that shapes the digital communities, because digital communities emerge and operate in an existing rule regime. It is the structural elaboration which occurs through internet spectatorship paves the way for institutionalization of digital community rule system. Its seductive power gathers a larger group of spectator and seduces them to use the internet portals in a repetitive manner resulting to morphogenesis and establishment of digital communities rule system and an associated new rule regime.

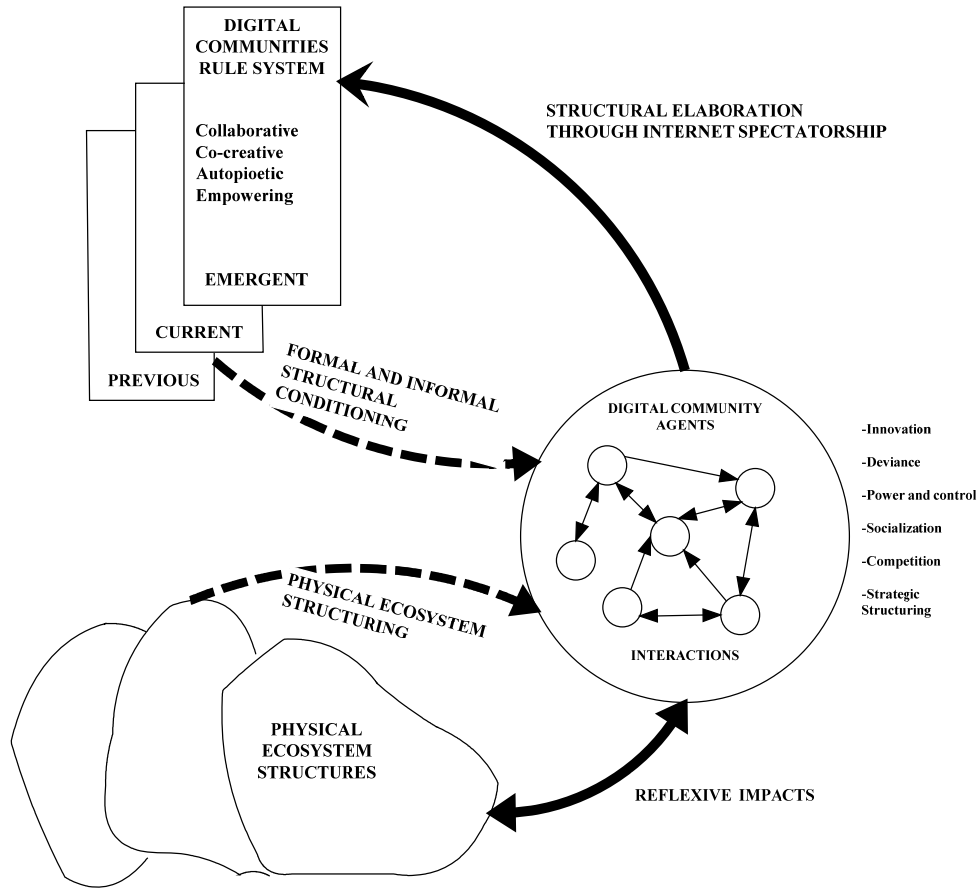


Figure 3 – Digital Communities Rule System.

Note: The Figure has been conceptualized and developed by us using Smart Draw Version 6. The style and arrangement of each component has been developed from Tom R. Burns and his groups' contributions. Reference: Burns, 1987.

8. Conclusion

Similar to any other community, digital communities begin their operation within existing rule regimes, for example, the KVK scientists discussed in this paper. However once they begin to operate they start to deviate from the existing rules through the structural elaboration principles facilitated by the mechanism of internet spectatorship. The seductive power of this mechanism in a sense empowers the agents to challenge the established rule/normative order conditioned by formal and informal structural conditioning. It is this seductive power which also promotes institutionalization of the new norm/rule

leading formation of (a) network of practice and (b) digital communities' rules system for network of practice consisting of collaborative, co-operative, autopoietic, and empowering properties.

When a socially empowering technology platform such as DEAL is introduced to a close normative social structure such as agriculture the rule system changes in evolutionary sequences beginning with initiation of an innovation to its legitimation and subsequent morphogenesis of the rule system and praxis. One of the ways through which such morphogenesis and praxis occurs is through the formation of network of practices. Network of practice in this sense is not just a community of knowledge sharing rather it is an innovational community that facilitates new rule systems.

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