

ISOMORPHISM IN ORGANIZATIONAL SELF-REPRESENTATION IN THE WORLD WIDE WEB? INSTITUTIONALIZATION PROCESS REGARDING INTERNET PRESENTATION OF ORGANIZATIONS

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ABSTRACT

From a neo-institutional perspective organizations should create facades which reflect societal expectations which differ between different social fields. We have developed a quantitative approach to analyze organizational self-representations in the World Wide Web. We can confirm our hypothesis that there is isomorphism in the Internet self-representation of organizations.

INTRODUCTION

The signaling of an organization's compliant behavior with institutional norms can be achieved not only by actually aligning an organization's structure to outside norms (DiMaggio & Powell, 1983; Meyer & Rowan, 1977), but also by means of actively creating a desired external image of an organization. This image might in fact deviate from the actual practices employed by the organization (Meyer & Rowan 1977; see also Brunson, 1989; Power, 1997). In order to create a desired outside image of themselves, organizations frequently employ public relations experts, place advertisements, sponsor public events and engage in other outwardly-oriented activities. These means of self-representation help organizations to develop an image of their function in society, of their internal processes and structure, and of their position within a network of organizations like suppliers, customers, governmental institutions, etc. Over the last years a new means for organizational self-representation has emerged: the Internet. The Internet presence of an organization is an easily accessible "window" to study organizational "window-dressing", and, as far as we are aware, it has never been subject to a systematic inquiry in the context of neo-institutional theory.

Can we expect to find relevant information about organizations by studying organizations' self-representations on the Internet? For a quantitative analysis of websites from an organizational perspective, we will focus on three aspects of websites which seem to be of great interest: (1) Organizations publish a certain number of pages with information about their organization, their goals, their members, their products, their cooperation partners, etc. As the creation of each page needs work, the size of a website measured by the number of pages indicates the effort an organization makes to present itself. (2) E-mail addresses are often named in congruence with departments or with individuals. Thus, the publishing of e-mail addresses can

be interpreted as the willingness to give information about the members of an organization and / or parts of the organizational structure. (3) A portion of all links are outgoing links to other sites or to pages of other sites. These links guide the viewer to other websites. Thus, if an organization refers to other websites, this can be interpreted as the willingness to share the attention of its audience with other partners. This openness towards other organizations can be interpreted as the attempt to show a specific degree of embeddedness into a network of organizations within society.

When collecting organizational self-representations on the Internet, a researcher obtains a snapshot of decisions an organization has made with regard to the efforts invested in self-representation, the willingness to grant access to their members, and the publication of relationships with other organizations. From a web design perspective organizations try to create individual representations which differ from each other to highlight their individuality. However, from work in neo-institutional theory one might infer that there should be important regularities regarding the organizational self representation in the internet due to isomorphic pressures stemming from the environmental conditions. Even if the internet is a relatively new medium these isomorphic pressures might be already observable. This would imply that organizations sharing similar environmental characteristics should actually display similarities in the structural characteristics of their websites.

THEORETICAL CONSIDERATIONS

According to Scott (Scott, 1987), environments can be classified and distinguished between technical and institutional environments. Organizations are assigned to categories, each differing in strength of institutional environments, in strength of technical environments and in degree of professionalization: (1) The *technical environment* consists of suppliers, customers, and competitors (Scott & Meyer, 1991). Market regulations, rules of conduct, etc. are the normative basis for the creation of relations and the guidance of interaction. (2) The *institutional environment* consists of political parties, trade unions, state regulations, etc. Actors in the institutional environment may influence the organization in question by sanctioning or promoting a certain type of behavior. (3) Some organizations are dominated by *professional environments* who share norms and beliefs acquired during professional education. Professional education extensively influences the way organizations work and represent their work in society.

The institutionalists' approach assumes that two organizations in the same environmental setting are exposed to the same norms and beliefs. The alignment with beliefs and norms produces *isomorphism* observable by homogeneity of organizations within and heterogeneity between environmental settings.

Hypotheses Regarding Size of Self-Representation

Organizations in institutionally highly developed environments are forced to legitimate their existence and prove their performance by demonstrating their activities and achievements to the public. The Internet has proven to be a very effective tool to convey the achievements of an organization to a general audience. Therefore, organizations operating in strong institutional environments should use the internet as a tool for self-representation extensively. Organizations that are operating in technically highly developed environments typically experience strong competitive pressures. These organizations have other ways than designing large websites to

demonstrate their effectiveness – for instance by making profit - and will, for competitive reasons, act more secretively than organizations in technically weakly developed environments.

H1: Organizations functioning in sectors that are highly institutionally developed and weakly technically developed are expected to put the most effort in their organizational self representations.

H2: Organizations functioning in sectors that are weakly institutionally and highly technically developed are expected to make the least effort in their organizational self representations.

H3: Organizations operating in sectors that are highly institutionally and highly technically developed are expected to put more effort in their web presentations than organizations in a weakly institutionally and highly technically developed environment, but less effort than organizations in highly institutionally and weakly technically developed sectors.

Hypotheses Regarding Outgoing Links

On the World Wide Web organizations are able to publish a lot of information about their relations to other organizations (suppliers, important customers, cooperation partners, etc.) and thereby demonstrate an organization's network embeddedness. Within strong technical environments these pieces of information about the relations of organizations could have two negative effects: first, firms producing for an anonymous market are often easily substituted and they therefore have no interest in sharing the attention of their audience with others. Second, organizations operating in competitive environments are often competing forcefully for customers and other resources. Instead of emphasizing network embeddedness, these organizations try to create an image of uniqueness, broad competence, and independence to reduce the bargaining power of others.

H4: Organizations in technically highly developed sectors will attempt to control and coordinate their production activities, buffering them from environmental influence by less openly displaying their network embeddedness than organizations operating in technically weakly developed sectors.

By contrast, organizations operating in weakly technical and highly institutional environmental settings should voluntarily demonstrate their network embeddedness by openly relating to the websites of all organizations with whom they cooperate. By openly showing whom they know and with whom they interact these organizations can demonstrate their position in society and justify their existence in the eyes of the public.

H5: Organizations operating in highly institutionally and weakly technically developed sectors will attempt to increase their legitimation and improve access to new resources by more openly stressing their network embeddedness than all other organizations.

Hypotheses Regarding E-Mail Addresses

As stated above, organizations in strongly developed technical environments compete with each other and hence have to be economically efficient or otherwise they will disappear

from the market. Thus, they try to coordinate and control their production activities and buffer them from environmental influences. Communicating via e-mail instead of via fax or letters has become increasingly important in recent years. Hence, one could expect that organizational members should publish their e-mail addresses together with other private information on the organization's web page. However, publishing email contact information would inform anonymous observers outside the organization about the organizational structure and would allow direct contact between non-members and members of the organization. Publication of e-mail addresses could, as a consequence, harm the integrity of the operational core and thus the production activities of an organization.

H6: Organizations operating in highly technical sectors will attempt to control and coordinate their production activities, buffering them from environmental influence by not publishing their internal organizational structure.

By contrast, for organizations operating in highly institutional and weakly technical environments it could be a sign of openness and transparency toward the public and would help to legitimize an organization's actions and expenses, when they give away large pieces of information including personal information about their members, including email addresses.

H7: Organizations operating in highly institutional and weakly technical sectors will attempt to openly display their production activities, and create transparency by publishing their internal organizational structure.

Professionalized organizational members are usually well educated and adhere to the rules and norms of their profession. The education and the sanctioning mechanisms within a profession allow the decentralization of decisions about activities.

H8: The more highly professionalized an organization, the more likely it is that organizational members are directly connected with their environment via the organization's website.

STUDY OF SELF-REPRESENTATION IN THE WWW

We built a web-crawler which is able to collect data on the internal structure of a WWW self-representation including all pages and outgoing links. During the year 2003 we gathered with our crawler information from the websites of several thousand organizations across all industries in Germany. From these we chose 689 organizations and analyzed their respective websites in this paper. We had to limit the number of analyzed websites to enable a manual classification into several dimensions as well as the collection of additional information on the respective organizations.

Dependent variables: The internet representation of an organization in the WWW is characterized by three variables: (1) Effort/size of an organization's web representation measured by the number of web pages. (2) Degree of transparency regarding the internal organizational structure measured as the number of e-mail addresses, which an organization publishes on the organization's website. (3) Degree of openly displayed network embeddedness measured as the number of outgoing links to other websites.

Independent variables: For the operationalization of the environmental setting in which an organization operates we use the environmental dimensions which have been already described in the theoretical part of the paper. The environmental setting is characterized by three dimensions: (1) The technical environment of an organization, which is classified as a weakly technical or strongly technical environment depending on the pressure for efficiency which is generally felt by an average organization in a given industry. (2) The institutional environment of an organization which is either classified as weakly institutional or strongly institutional environment (Jepperson, 1991). (3) The degree of professionalization: Following Scott / Meyer (1991) we distinguish between professionalized sectors where professions influence the identity of organizations and less-professionalized sectors where professions may exist but are not the dominant groups within these organizations. (4) Hierarchical embeddedness and geographical scope of the organization: In our estimations we control for the level of hierarchical embeddedness and geographical scope of an organization, since it might influence an organization's decision regarding self-representation in the internet. (5) We have also included a size measure for each organization in our estimation. The organization's size was collected via a telephone interview which we conducted with all 689 organizations.

EMPIRICAL RESULTS

From a multiple regression analysis we can infer that the number of web pages increases linearly or even quadratically with the increasing size of the organization. Our results confirm hypothesis 1 in which we stated that organizations operating in strongly institutional and weakly technical environments should put the largest effort in their web presentation and create the largest websites. Furthermore, we find that organizations in highly developed institutional and highly technical environments have fewer web pages than organizations in weakly developed technical and institutional environments. We were surprised to find that organizations operating in low institutional and high technical environments do not reduce the size of the website more strongly. The coefficient in most of the estimations is less negative than for organizations in high institutional/high technical environments and the variance is greater. We therefore have to reject hypotheses 2 and 3. Nonetheless, we can state that organizations operating in highly developed technological environments publish significantly less web pages than organizations operating in weakly technical environments.

The number of outgoing links rises with increasing size of the organization. We find that organizations operating in highly institutional and weakly technical environments have significantly more outgoing links and therefore a higher degree of network embeddedness than all other organizations. Only in those regressions where we introduced the variable "profession" we obtained a different finding. In these regressions the variable "professional organizations" picks up all the effects shown by a strongly positive and significant coefficient. Given that professional organizations operate mostly in highly institutional and weakly technical environments we can still accept hypothesis 5 of our theory section. Organizations in highly institutional and highly technical environments show the least outgoing links. By contrast, the number of outgoing links in organizations operating in weakly institutional and highly technical environments is not significantly different from organizations of the comparison group (weak technical / weak institutional environment). We therefore cannot accept hypothesis 4.

With increasing size of the organization, the number of published email addresses rises as well. Organizations operating in highly institutional/weakly technical environments have a large positive coefficient. The coefficient for the dummy variable high institutional / weak technical

environment shrinks in size and loses its significance when we introduce the variable professionalization but it remains positive. Again we have an interaction between the high institutional / weak technical dummy and professionalization. We cannot reject our hypothesis 8. Given our argument from before, that professional organizations are typically found in strong institutional environments, we also do not reject hypothesis 7. Organizations in highly institutional / highly technical as well as organizations in highly technical / weakly institutional environments display a smaller number of email addresses. We therefore confirm hypothesis 6.

CONCLUSION

From the results of our analysis we can infer homogeneous behavior regarding self-representation in the internet of organizations that share a similar environment and heterogeneous behavior of organizations operating in different environmental settings. This situation could be called an isomorphic *status* where social cues like size of websites, e-mail addresses and outgoing links vary according to different environmental settings. As this analysis lacks a time dimension, we are technically not able to confirm an ongoing *process* of isomorphism. As our data is restricted to the self-representations, the observed isomorphism could be called “*symbolic isomorphism*” (Glynn & Abzug, 2002), because we have observed regularities in the publication behavior and not necessarily in the structure of organizations. Nevertheless, the environmental dimensions of Scott and Meyer (1991) - technical environments, institutional environments, and professionalization - help to get a rough understanding of the creation of complex symbols of organizational self-representation.

REFERENCES AVAILABLE FROM THE AUTHORS

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