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ORGANIZATIONAL INITIAL CATEGORIZATION: IMPRINTING AND THE MITIGATION OF IMPRINTING

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INTRODUCTION

A major challenge facing newly founded organizations is premature categorization by external audiences (e.g., investors, regulatory agencies, and customers). That is, external audiences form the initial impression of a new organization by cognitively sorting new organizations into meaningful groups or prototypical categories (Ashforth & Humphrey, 1995; Zuckerman, 1999), often based on very little information. External audiences categorize in order to reduce uncertainty (Fiske & Neuberg, 1990) because new organizations are typically shrouded in high uncertainty (Stinchcombe, 1965). New organizations are also less capable of resisting categorization because they typically have limited credibility in a field and thereby their own self-categorizing signals tend to be discounted (Singh et al., 1986). Moreover, new organizations lack the resources to actively influence external audiences (Ashforth & Humphrey, 1995).

Organizational initial categorization has received relatively little attention. Specifically, imprinting research, despite its focus on examining how founding conditions affect organizations (Stinchcombe, 1965), mainly considers objective founding conditions, which are often argued to directly affect an organization's acquisition of resources and capabilities of competition. While some previous studies suggested that objective founding conditions might influence how external audiences perceive a new organization (Baum et al., 2000), external audiences' perceptions are at most implied or assumed rather than directly examined.

We investigate how initial categorization affects an organization by addressing the following questions. Does initial categorization imprint an organization throughout its life history? Under what conditions is the imprinting effect likely to be stronger? Imprinting research emphasizes the pressure of historical structural conditions, but pays scant attention to how the imprinting effect may be mitigated. Therefore, another aim of our research is to understand how the imprinting effect of initial categorization may be mitigated due to two mechanisms: recategorization and disassociation.

THEORY

The Imprinting Effect of Initial Categorization

The consequences of initial categorization may persist throughout an organization's life history because initial categorization is likely perpetuated through a self-fulfilling process (Merton, 1968). External audiences, after categorizing a target organization, tend to interpret residual uncertainty and ambiguity to support initial categorization (Baldwin, 1992). When new information about the target organization is available, external audiences tend to pay selective attention to information confirming initial categorization, but overlook or discount contradictory information (Dutton & Jackson, 1989). The cognitive effect of initial categorization is often accompanied by a behavioral effect in the sense that external audiences likely behave toward an

organization in a way consistent with the initial category to which the organization is assigned (Rosenthal & Jacobson, 1968). These cognitive processes and behaviors likely convince external audiences of the accuracy of the initial categorization (Snyder & Swann, 1978). Target organizations may also respond cognitively and behaviorally. Initial categorization may influence how an organization defines and perceives itself because how we perceive ourselves is often a function of the looking-glass self, whereby we come to see ourselves from the views of others with whom we interact (Cooley, 1902). An organization may also behave in a way consistent with the underlying expectation of its initial categorization (Benjamin & Podolny, 1999). When an organization internalizes its initial categorization, it strengthens the validity and confirms the accuracy of the initial categorization.

The self-fulfilling process depicted above may unfold in a broader social structure to create more complicated social construction effects. Consider the case of a new organization that is initially categorized by an external audience that has come to be aware of the new organization. Now, not only is this same external audience likely assess the organization in the future on the basis of the initial categorization, but also other external audiences connected with the first audience likely draw on the initial categorization to reach new quality judgment about this organization. The new quality judgment tends to validate the initial categorization, which further exerts stronger influence on even more external audiences. As this process goes on, the initial categorization becomes a social fact or institutionalized (Gould, 2002).

Hypothesis 1a: Initial categorization is likely to have imprinting effect on an organization throughout its life history.

The imprinting effect of initial categorization may vary with the level of uncertainty in a field at the founding of an organization. Podolny (1994) observed that investment banks relied more on the social signal of status to select syndicate partners in the more uncertain non-graded bond market. It thus suggests that, like organizational uncertainty, field uncertainty leads quality judgments to be socially influenced (Gould, 2002). Insofar as initial categorization constitutes an available social signal about a new organization, it is more likely to be utilized to assess an organization or the self-fulfilling process discussed above is more likely to be triggered and sustained when field uncertainty is higher at the founding of this organization.

Hypothesis 1b: The higher the field uncertainty at the founding of an organization, the stronger the imprinting effect of its initial categorization.

Mitigating the Imprinting of Initial Categorization

Recategorization. Recategorization, whereby external audiences revise initial categorization or search for an entirely new categorization, is triggered when new available information cannot fit neatly into initial categorization (Ashforth & Humphrey, 1995). The major reason that initial categorization is enacted and perpetuated is the uncertainty surrounding a new organization's quality. When the information on organizational behavior and performance becomes available and considerably disconfirms initial categorization, external audiences may change their initial categorization of an organization (Fiske & Neuberg, 1990). Therefore, it is the inconsistency between initial categorization and subsequent organizational performance rather than the organization's subsequent performance per se that triggers recategorization:

Hypothesis 2: The greater the inconsistency between an organization's initial categorization and its subsequent performance, the weaker the imprinting effect of its initial categorization

Disassociation. The imprinting effect of initial categorization may also be mitigated by the disassociation between an organization and its initial categorization (Ashforth & Humphrey, 1995). Initial categorization, once enacted and then perpetuated, becomes part of an organization's social identity, which is often encoded in visible organizational characteristics such as organizational name, geographical location, and external relationships. For example, "To many people, corporations are 'nothing but names'" (Boddeyn, 1967: 39). An organization's name likely brings to our attention immediately its fundamental values, social affiliations, products, and various other aspects (Olins, 1989). Geographical location also constitutes and symbolizes an organization's identity (Passi, 1996). Traditionally, an organization has always been established in, and its identity thus closely related to, a particular geographical location. For an organization with many branches located in different places, it is often more identified with its headquarter than with its branches. Moreover, geographical locations for an organization's branches usually exhibit some essential similarities that reflect the corporate identity (e.g., Wal-Mart stores are always located in rural areas, indicating its low cost identity). Similarly, external relationships express and influence organizational identity (Rao, Davis & Ward, 2000). Podolny (2001) suggested that relations are relevant not only because they are pipes through which resources and information are transferred but also because they are prisms through which organizations are perceived by external audiences. Thus, external relationships are one of the indicators or proxies that external audiences use to measure an organization (Podolny, 1993).

Therefore, the mere presence of these visible characteristics likely activates a set of schemas about an organization. External audiences identify an organization mainly through these visible characteristics (Hatch & Schultz, 2000) and change in these characteristics may result in the loss of the connecting points between an organization and external audiences. As a result, external audiences cannot readily activate the set of schemas about an organization and thus initial categorization in particular less likely becomes the basis for sanction. Moreover, the more times an organization changes its name, locations or external relationships, the more cognitively taxing for external audiences to track the organization, and the more likely it is disassociated, at least cognitively, from its initial categorization.

Hypothesis 3: The more frequently an organization changes its name, the weaker the imprinting effect of its initial categorization is.

Hypothesis 4: The frequently an organization changes its geographical location, the weaker the imprinting effect of its initial categorization is.

Hypothesis 5: The more frequent an organization changes its external relationships, the weaker the imprinting effect of its initial categorization is.

METHOD

We test our hypotheses in the setting of American college football bowls from its founding in 1902 up to 2004. Bowls are organizations rather than mere football contests because entrepreneurs need to incorporate organizations to stage annual competitions and handle related businesses. The stratification of American college football segmented bowls into major and

minor categories with major bowls only matching football schools from Division I-A. This study focuses on the 65 major bowls mainly because of their importance and the availability of data. We consulted various archival sources to construct a longitudinal data set of all major bowl organizations: American College Football Record Book, ESPN Sports Almanac, The New York Times Archival, the LexisNexis Database and The U.S. Census Data.

Dependent variable. To examine the consequence of initial categorization, we focused on bowl performance measured as the number of spectators watching the annual contest in a bowl's stadium. We did not weight the performance measure by a bowl's stadium size because stadium size was not totally fixed because a bowl often expanded its stadium and it could add several thousand temporary seats in the case of overselling tickets. Bowl performance was rescaled by 1000 and log-transformed.

Independent variable. Bowls match football schools for their annual contests through bowl bidding processes, whereby bowls independently send invitations to football schools. Bowl bidding is similar to auction. The open bidding process results in a bowl's *initial categorization*, which refers to external audiences' impression of a bowl at its founding year. Since football schools vary in their appeal to football fans, external audiences' initial impression of a bowl should be manifested in which two football schools eventually choose a bowl. If a bowl is favorably categorized, football schools with high spectator appeal should be willing to play in its annual contest and vice-versa. In general, football schools' spectator appeal depends on their annual rankings (White, 1980). Moreover, for a bowl to be attractive to football fans, its two football schools should constitute an even match in the sense that these two football schools should both be highly ranked, which implies similar ranking (Leifer, 1990).

We drew on the Associated Press (AP) ranking to operationalize initial categorization. The AP ranking receives a lot of attention as football schools, bowl organizations, sports analysts and football fans all consider it as a legitimate quality and popularity reference. Since the AP ranking only ranks top 25 football schools, we treated all non-ranked football schools as having a rank of 26. We then reverse-coded the ranking so that, for example, No. 1 gets a score of 25 (26 – 1) while all non-ranked schools get a score of 0 (26 -26). We used the following simple formula to calculate the measure of initial categorization:

$$\ln(IC_i) = \ln\left(\frac{(26 - r_{i1}) + (26 - r_{i2})}{(26 - r_{i1}) - (26 - r_{i2})}\right) \quad (r_{i1} < r_{i2})$$

Where IC_i denotes the initial categorization for bowl i , r_{i1} and r_{i2} are the AP rankings of the two football schools for bowl i , and the restriction of $r_{i1} < r_{i2}$ guarantees that the denominator is positive. A high IC score means that a bowl is favorably categorized at its founding if it can invite two football schools that are highly and closely ranked. Note that categorization should not be understood literally. Our continuous measure of initial categorization essentially captures external audiences' initial evaluation of a bowl, which was formed through categorization processes.

We measured *field uncertainty* as an inverse function of bowl density at a bowl's founding as suggested by population ecology research (Carroll & Hannan, 1992). We multiplied founding bowl density by -1 so that a bigger number corresponds to more uncertainty. Hypothesis 2 suggests that it is the comparison between initial categorization and subsequent performance (one year before the study year) that moderates the effect of initial categorization. Thus, we used the absolute difference between standardized versions of the initial categorization and subsequent performance to measure *performance difference*. *Name change* and *location*

change were measured as the simple count of times a bowl changed its name and location respectively before the study year (cumulated over time). There are two external relationships that are important for major bowls: primary corporate sponsorship and conference affiliation. We measured *relational change* as the times a bowl had changed its primary sponsor and conferences respectively before the study year (cumulated over time). We standardized all theoretical variables before forming interaction terms.

To address alternative explanations, We included many control variables: bowl status, bowl age, local state population, bowl location (south/north), corporate sponsorship, conference affiliation, bowl alliance affiliation, BCS affiliation, bowl density, bowl schedule density, bowl local density, football school population growth, GDP growth, NCAA regulation, BCS existence, TV cable network, and World War II (the details about these controls are available upon request). We used a random-effects model specification mainly because the alternative fixed-effects specification does not allow for the inclusion of time-invariant variables (initial categorization, field uncertainty at founding and other founding conditions).

RESULTS

Table 1 presents the results of regression analyses with Model 1 as the base model. Model 2, adding initial categorization, shows that initial categorization has a significant positive impact on organizational performance and the observed effect persists across all models. Hypothesis 1a is thus strongly supported. Note that adding initial categorization does not take away the effects of other objective founding conditions, suggesting that initial categorization is not just a mediator between other founding conditions and organizational performance but explains additional variance in organizational performance not accounted for by previously theorized variables. Model 3 tests Hypothesis 1b. The significant positive coefficient of the interaction term between initial categorization and field uncertainty lends strong support to the hypothesis that the effect of initial categorization is stronger when field uncertainty is higher.

Table 1 About Here

Models 4 to 7 serve to test Hypotheses 2, 3, 4 and 5, which state that inconsistent subsequent performance, name changes, stadium changes and external relationship changes respectively mitigate the imprinting effect of initial categorization. In Model 4, the coefficient of the interaction term between initial categorization and performance difference is significant with a negative sign, confirming Hypothesis 2. In Model 5, the coefficient of the interaction term between initial categorization and name changes is significant and has a negative sign, supporting hypothesis 3. In Model 6, the significant negative coefficient on the interaction between initial categorization and location changes indicates that Hypothesis 4 is also supported. In Model 7, while the coefficients for both interaction terms have the predicted negative signs, only the coefficient for the interaction term between initial categorization and sponsor changes is significant. Taken together, the analysis in Model 7 provides support for Hypothesis 5.

DISCUSSION

This paper is premised on the observation that newly founded organizations face the challenge of premature categorization. When faced with a new organization whose quality and

other attributes are uncertain, external audiences are likely to adopt the cognitive shortcut of quickly categorizing based on salient characteristics and then attributing category characteristics to the new organization. Self-fulfilling processes tend to perpetuate the initial categorization, which as a result tends to imprint the organization. We conceptually and empirically showed how the imprinting effect of initial categorization is generated and then potentially mitigated by recategorization or disassociation induced by subsequent organizational performance, name changes, location changes and external relationship changes.

Our study makes several significant contributions. We expand the literature on the imprinting effect of organizational founding conditions. Our findings indicate that initial categorization constitutes a founding condition, which is external audiences' subjective perception and thus different from other objective founding conditions previously examined. We have showed that imprinting effects can be mitigated, pointing to the need for research on "deimprinting". This study also speaks to how external perceptions constrain new organizations by explicating a mechanism of categorization through which external audiences form deindividuated perceptions of a new organization and explicitly measured initial categorization instead of treating it as an underlying mechanism. Our study also contributes to organizational identity research by elucidating the dynamic tension between imposed and self-projected organizational identity.

To extend our study, future research may start addressing several important issues. If changing visible organizational characteristics has serious consequences, why organizations do not use these various types of change more often, especially when symbolic change (e.g., name change) would seem to be costless? What are some internal and external constraints that limit the usage of these change strategies? Besides those organizational changes we examined, what other types of organizational change can attenuate the imprinting of initial categorization? Besides organizational changes, can change in a field mitigate the imprinting of initial categorization?

REFERENCES AVAILABLE FROM THE AUTHORS

Table 1. Random-effects Models of Initial Categorization and Recategorization (DV: Bowl Attendance)^a

| Variable | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|--|--------|--------|---------|---------|---------|---------|---------|---------|
| Initial categorization (IC) ^b | | 0.217* | 0.291* | 0.451* | 0.285* | 0.202* | 0.273* | 0.304* |
| IC x field uncertainty | | | 0.146* | 0.149* | 0.127* | 0.173* | 0.137* | 0.159* |
| IC x performance difference | | | | -0.130* | | | | -0.074* |
| IC x name change | | | | | -0.118* | | | -0.061* |
| IC x location change | | | | | | -0.208* | | -0.177* |
| IC x sponsor change | | | | | | | -0.052* | -0.001 |
| IC x conference change | | | | | | | -0.027 | -0.0003 |
| Field uncertainty ^b | -0.140 | -0.115 | -0.143 | -0.132 | -0.117 | -0.183* | -0.143 | -0.159* |
| Performance difference ^b | -0.041 | -0.046 | -0.058* | -0.057* | -0.077* | -0.111* | -0.093* | -0.112* |
| Name change ^b | 0.064* | 0.065* | 0.067* | 0.060* | 0.013 | 0.013 | 0.052* | -0.012 |
| Location change ^b | 0.084* | 0.085* | 0.085* | 0.085* | 0.091* | 0.118* | 0.096* | 0.116* |
| Sponsor change ^b | -0.026 | -0.027 | -0.026 | -0.022 | -0.033 | 0.007 | -0.032 | 0.001 |
| Conference change ^b | 0.053* | 0.056* | 0.059* | 0.059* | 0.087* | 0.005 | 0.056* | 0.027 |
| R ² | 0.52 | 0.61 | 0.62 | 0.63 | 0.63 | 0.67 | 0.63 | 0.68 |
| χ ² | 1243.6 | 1258.2 | 1262.6 | 1327.5 | 1471.1 | 1763.9 | 1349.2 | 1885.4 |

^a * p < 0.05; Two-tailed test for all variables; N = 945 organization-year observations for 65 bowls.

^b Variables are standardized. Only a few control variables are reported due to space constraints.

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