

Analysis of the System Architecture of the Network Media Ecological Environment (Postprint)

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Abstract

Real-world social systems encompass various subsystems at different hierarchical levels, including nations, regions, cities, and families. The structure of these subsystems is composed of numerous constituent elements, such as “individuals,” “groups,” and “organizations,” which are mutually interconnected and collectively foster the harmonious and stable development of society. Likewise, with the advancement of Internet technology, an increasing number of individuals have begun to congregate in online spaces. Within the network media ecological environment, we designate “social individuals” as “unidimensional behavior IDs.” Similar to real-world social systems, the network media ecological environment system also exhibits a distinct structure, primarily comprising five major structural components: “unidimensional behavior ID,” “unidimensional behavior tribe,” “functional media,” “functional media ecology,” and “media ecology layer.” This article primarily examines the composition of the most fundamental structures within the network media ecological architecture—namely, the unidimensional behavior ID and the unidimensional behavior tribe.

Full Text

An Analysis of Network Media Ecological Environment Architecture

Abstract: Real-world social systems contain various hierarchical subsystems such as nations, regions, cities, and families. These subsystems are composed of numerous elements—including “individuals,” “groups,” and “organizations”—that interconnect and mutually reinforce each other to promote harmonious and stable social development. Similarly, with the advancement of internet technology, increasing numbers of people are congregating online. Within the network media ecological environment, we refer to “social individuals” as “unidirectional behavior IDs.” Much like real-world social systems, the network media ecological environment architecture possesses a distinct structure, primarily

comprising five components: “unidirectional behavior ID,” “unidirectional behavior tribe,” “functional media,” “functional media ecology,” and “media ecology layer.” This paper focuses on analyzing the most fundamental structures within the network media ecological architecture: the composition of unidirectional behavior IDs and unidirectional behavior tribes.

Keywords: network media ecology; ecological structure; unidirectional behavior ID; unidirectional behavior tribe

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1.1 Conceptual Definition

In the network media ecological environment system, all media activities are manifested through behavior IDs, and the greater the aggregation of IDs, the higher the value generated. In online environments, human behavior in network media gradually becomes fragmented. Within a decontextualized, derolized, and depersonalized network environment, individual behavior splits into unidirectional behaviors.

In real-world social contexts, audience behavior is significantly influenced by social roles, which constrain behavioral implementation. Under specific role constraints, audiences cannot perform certain behaviors to satisfy their needs. Individuals in different roles restrain their behavior in public settings due to role limitations. In network environments, however, audiences appear as unidirectional behavior IDs. All behaviors are displayed through these IDs, allowing us to observe only their actions without concerning ourselves with their underlying roles. Unidirectional behavior IDs thus enable the derolization of audience behavior, making it easier to satisfy audience needs.

“Scene” refers to the physical environment in which audiences perform behaviors. In crowded environments, audience behavior tends toward excitement, whereas in quiet settings like libraries, behavior becomes more rational. In real-world environments, audience behavior is constrained by scene, making the spiral of silence theory highly applicable. In network environments, however, audience behavior is not bound by scene, allowing individuals to act according to their internal needs. Even when majority behaviors emerge online, decontextualization enables audiences to make free choices—they can follow if they agree or refuse if they disagree. As long as behaviors remain within acceptable boundaries, audiences can freely select their actions in network environments.

Since human behavior in network environments is recorded according to media dimensions, and media can only store information unidirectionally—shopping

behaviors are stored only in shopping media, chat behaviors only in chat media—behavior in network media is unidirectional and irreversible. In network media ecology, various media exist in parallel, and people's media behaviors do not intertwine. Different media store only one type of media behavior, while other behaviors cannot be stored in that medium. In summary, a unidirectional behavior ID refers to the “unidirectional person” whose audience behavior is recorded solely through media dimensions within a decontextualized, derolized network media ecological environment. In network environments, unidirectional behavior IDs perform unidirectional behaviors freely and proactively, 不受社会环境 or social role influences.

1.2.1 Profit-Seeking Nature of Unidirectional Behavior IDs

Unidirectional behavior IDs in network society are reflections of real-world individuals and thus possess the attribute of profit-seeking. Various behaviors performed by unidirectional behavior IDs in network society aim to facilitate exchange and ultimately acquire benefits. Social exchange theory can similarly explain behaviors in network society.

Social exchange theory posits that all human behavior is governed by exchange activities that yield rewards and compensation, meaning all human social activities can be reduced to a form of exchange, and the social relationships formed through such exchanges are themselves exchange relationships. The same holds true in network society, where the implementation and exchange of behaviors also aim to obtain benefits. Some behavioral exchanges seek monetary gain, others seek dignity, and the highest form of behavioral exchange reward is the acquisition of power. Therefore, behavioral exchanges and aggregations in network society ultimately serve to obtain benefits and satisfy various needs.

1.2.2 Conformity of Unidirectional Behavior IDs

Conformity refers to the phenomenon where individuals' concepts and behaviors change direction under group guidance or pressure to align with the majority. Numerous conforming behaviors also exist in network media ecological environments. Specialized media in networks exploit the conformist psychology of various behavior IDs to attract numerous IDs to perform identical behaviors, thereby achieving their objectives. In network environments, many earth-shattering events indeed aggregate audience behaviors, creating sensational effects as behavior IDs compete to discuss and participate. However, many such situations result from human factors—deliberate propaganda and hype that attract public attention. Behaviors easily aggregate once media promotes them. Although audience behavior in network media environments is not constrained by roles or social scenes, and behavior IDs can autonomously perform certain behaviors according to their preferences and interests, conformist psychology leads us to perform the same behaviors when surrounding IDs are doing so.

1.2.3 Controllability of Unidirectional Behavior IDs

Control over unidirectional behavior IDs in network society is divided into external and internal control. External control refers to how behaviors of unidirectional behavior IDs in network society are influenced by factors such as ethnicity, social class, geographic region, social role, and social values. The continuous fermentation of various negative online events largely occurs because these events violate audiences' inherent value judgments and moral standards, triggering audience aversion and subsequently creating disharmonious voices online. Therefore, unidirectional behavior IDs are, to some extent, controlled by external network society factors such as ethnicity, class, and values.

Most control over unidirectional behavior IDs, however, stems from internal control within network society. This requires explaining field theory first: field theory posits that every action is influenced by the field in which it occurs, and this field refers not only to the physical environment but also to others' behaviors and many related factors. Today, many behaviors such as shopping and tourism are influenced by fields to a certain extent. People form shared cognitions, leading to the concentrated emergence of identical behaviors during certain time periods, making audiences' unidirectional behaviors highly susceptible to internal network society factors.

1.3.1 Fundamental Role of Unidirectional Behavior IDs

Unidirectional behavior IDs constitute the most basic unit of network society and are an indispensable component of its formation. Using biological knowledge for explanation: the human body is organized through five levels—cell, tissue, organ, system, and individual—with the cell being the most fundamental unit. By the same principle, network society formation undergoes a similar process: unidirectional behavior ID → unidirectional behavior tribe → functional media → functional media ecology → functional media ecology layer → network society. Among these components, the unidirectional behavior ID is the most basic unit and the starting point of all activity. In the network social ecosystem, unidirectional behavior IDs play a fundamental role that cannot be ignored for the overall functioning of network society. The ultimate formation of network society derives from the various behaviors performed by unidirectional behavior IDs. It is precisely through the continuous activities, behavioral exchanges, aggregations, and dispersals of unidirectional behavior IDs that network society can ultimately take shape.

1.3.2 Bridging Role of Unidirectional Behavior IDs

Another major function of unidirectional behavior IDs is serving as a bridge from physical society to network society. Although this paper discusses the architecture of network media ecological environment systems, we cannot ignore that network society is an extension of real society. Therefore, we cannot discuss network society activities in isolation from real society. In real society, the

individual is the most basic unit, and all social activities rely on human completion. Network society is a reflection of real society, where all activities are conducted through behaviors, which in turn are performed through the reflection of humans—unidirectional behavior IDs. In real society, when individuals wish to engage in certain activities in network environments, they must do so through unidirectional behavior IDs, which connect network society with real society and continue to perform the same functions in network society. In network society, unidirectional behavior IDs generate behaviors and conduct social exchanges to obtain benefits, thereby facilitating more convenient communication and interaction between real and network societies.

2.1 Conceptual Definition

A tribe refers to tribal groups with different powers that emerge as people continuously aggregate. A unidirectional behavior tribe refers to tribal groups formed through the continuous aggregation of network behaviors in network society. In network environments, unidirectional behavior IDs form tribal groups of varying sizes according to different needs and interests. Common unidirectional behavior tribes in network society include group tribes and personal tribes.

The most obvious examples of group tribes are QQ groups, WeChat groups, various Baidu Tieba forums, and other discussion boards. These small groups may share internal linguistic logic and expression forms that remain completely opaque to outsiders, making them resemble small parallel universes. The most obvious examples of personal tribes are Moments (WeChat) and Toutiao. Moments aggregates people who “share the same tastes,” retaining only “our own people.” Toutiao is even more ingenious—the more you view and click, the more the backend algorithm learns your preferences, resulting in increasingly personalized news feeds. What you see becomes only what you want to see, like a news version of Moments.

2.2 Characteristics of Unidirectional Behavior Tribes

Currently, an increasing number of people choose to communicate and interact through networks, and this group’s social influence continues to grow. This group is called the unidirectional behavior tribe. Various BBS forums, microblogs, and social networking sites all represent manifestations of unidirectional behavior tribes. Internet-based communities have already created a new model of human social life—the unidirectional behavior tribe. Relying on networks, unidirectional behavior tribes establish the foundation for interaction and satisfy participants’ needs for interest, interpersonal relationships, and transactions. Unidirectional behavior tribes possess advantages that real-world communities cannot match, thus growing extremely rapidly and breaking traditional community concepts centered on geography. Unidirectional behavior tribes also share similarities with real-world communities: both possess shared member emotions and experiential qualities, and community members can mutually influence each other, share information and feelings, and satisfy needs.

Like real-world communities, unidirectional behavior tribes also include corresponding organizations, members, specific venues, and cultural characteristics such as internal norms and consciousness.

2.2.1 Behavioral Interactivity

Unidirectional behavior tribes are aggregates of behaviors bound by certain behavioral relationships. Tribe members maintain regular interactive relationships. Interpersonal relationships within tribes are bonded by mutual understanding and based on certain specific interests and emotional connections. Fleeting interactions cannot form lasting tribes; the formation and development of group interactive relationships require sustained interaction over time.

Unidirectional behavior tribes formed based on shared interests and needs possess advantages that real-world communities cannot compare with, thus developing at extremely rapid speeds and ultimately breaking traditional geographically-centered community structures. Unidirectional behavior tribes also share certain similarities with real-world social communities: both possess similar member emotions and experiential qualities, and both feature behavioral interactivity. Community members can mutually influence each other, share information, express emotions, and satisfy mutual needs.

Behaviors within unidirectional behavior tribes are mutually communicative and interconnected. Through continuous interaction, tribes can satisfy needs on one hand and promote emotional exchange on the other. For instance, top-tier celebrities have tens of millions of fans, and in network environments, each fan's ID forms a large tribal group. Within the same group, all unidirectional behavior IDs are not isolated but rather communicate and connect with each other. In fan tribes, members exchange views on celebrity behaviors and perform similar actions. The behaviors among various IDs are interactive, and emotional connections are maintained through such behavioral interactions.

2.2.2 Behavioral Normativity

Through ongoing interaction, group members develop similar concepts, attitudes, values, and beliefs through mutual psychological and behavioral influence or learning. Behaviors within unidirectional behavior tribes also exhibit normativity, with each tribe possessing behavioral norms suitable for its operation. Each unidirectional behavior ID follows certain rules and regulations within the tribe to ensure normal functioning. When existing as isolated individuals, unidirectional behavior IDs generally hold different views, but when they connect and ultimately form a tribe, their judgments and evaluations gradually converge. Tribal standards function like a ruler, subtly placed before each member, constraining their behaviors and providing unified criteria for cognitive patterns and evaluation principles, ultimately resulting in shared opinions and perspectives. At that point, even if a minority holds different viewpoints, the pressure of norms and individual compliance inevitably forces them to align

with the norms. The phenomenon of Weibo accounts being blocked, for example, represents the consequence of failing to follow norms. Although Weibo enables people to express themselves more freely in network environments, their behaviors must still follow certain norms. Violating these norms may result in condemnation by public opinion at best or legal punishment at worst.

2.2.3 Consistent Appeals

Under the combined influence of group consciousness and group normative standards, social groups can produce consistent actions at any time. Similarly, in unidirectional behavior tribes, audience behavioral appeals exhibit consistency. Most different unidirectional behavior IDs aggregate based on shared appeals, whether due to common interests or common needs. In real life, people join different groups according to their preferences and interests to demonstrate their advantages. Likewise, in network environments, people form unidirectional behavior tribes with consistent appeals due to interests or other needs. In network environments, there exists a group of IDs we call star-chasing fans, who combine because of shared beloved objects, and within the tribe, their appeals are consistent—all their behaviors serve the initial appeal.

The consistency of audience behavioral appeals in unidirectional behavior tribes stems from two sources. On one hand, it arises from personal interest and emotional support for the tribe; most of their behaviors result from tribal identification, as they willingly share the same appeals with others to maintain the tribe's normal operation. On the other hand, it is based on tribal pressure. Group pressure also exists in network environments. When an activity aggregates the vast majority of behaviors, as part of the tribe, the minority may be compelled by group pressure and tribal interest to perform the same behaviors and share the same appeals, with everything centered on the tribe's interests.

2.2.4 Behavioral Autonomy

The behaviors aggregated within unidirectional behavior tribes possess a certain degree of autonomy. In unidirectional behavior tribes, audience joining and exiting are completely autonomous. In networks, people can choose their communication partners independently and join a particular tribe according to their own interests and hobbies, with no right for others or organizations to intervene or dominate. In real society, the power to terminate interactions is unequal, and ending relationships requires process and conditions. In network communities, however, everyone possesses equal power to terminate communication and interaction. Furthermore, the cost of participating in and exiting network social interactions is extremely low, which facilitates the full display of individual personality and enables the full development of autonomy and equality in interpersonal communication.

Based on tribal members'sense of identification and influenced by tribal pressure, behaviors within unidirectional behavior tribes are interactive. Through behav-

ioral interaction, the emotions of various behavior IDs are connected, promoting emotional exchange among unidirectional behavior IDs and strengthening identification with the tribal group. The long-term operation of tribes cannot be separated from consistent behavioral norms. Similar to social groups in real society, the operation of unidirectional behavior tribes relies on certain behavioral norms, which provide measurement standards for behaviors and reduce behavioral disorder. The appeals of each unidirectional behavior tribe' s members are consistent, as they aggregate based on initial shared interests and emotional pursuits. The sense of identification in tribes formed through personal interest far exceeds that of other groups.

In network environments, the aggregation of unidirectional behavior IDs forms different unidirectional behavior tribes. Through mutual communication and cooperation among these tribes, complete functional media are ultimately formed, maintaining normal operation among various tribes and promoting the harmonious development of network society.

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