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Social Media — A Case Study on Humans & Their Interactions in a Digital Age

Introduction

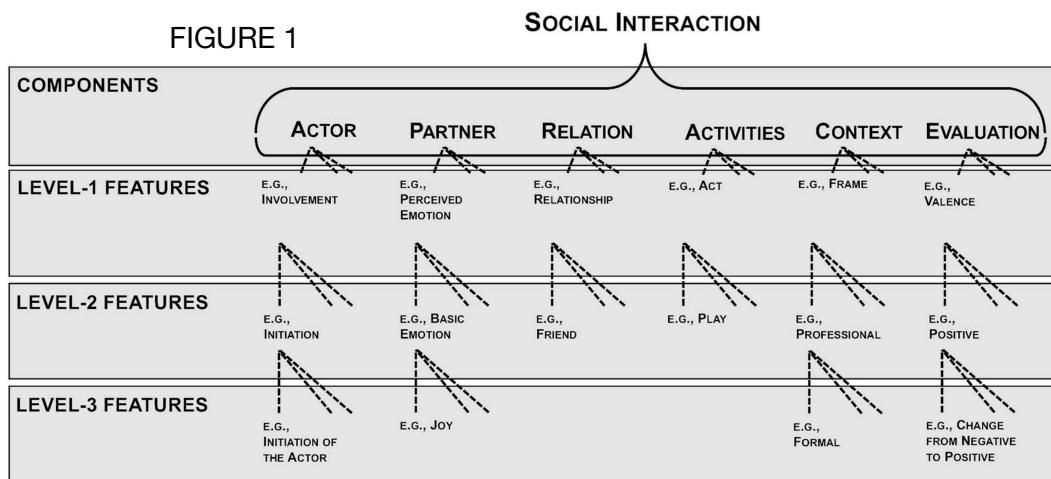
The rise of social media is generation-defining in its widespread, rapid adoption among the public and its not-yet-fully-understood consequences on society. This case study compares the interactions afforded by social media with traditional models of social interaction and explores how architectural decisions of digital platforms can impact social behaviors. This high level of abstraction, rather than focusing on the UI/UX of any one specific platform, for example, allows for exploration into the organizing principles that we as users employ when deciding to post online, ultimately defining a Taxonomy of Social Media's Functions for Interactions.

WHAT is being organized – Components of Social Interaction

The structure of social interaction has been of interest to social scientists since the inception of experimental and behavioral methods of testing hypotheses. Here we discuss insights from the six systematically defined components of social interaction proposed by Hoppler et al. (2022) (Figure 1, below).

We will discuss below these six components: the Actor, Partner, Relation, Activities, Context, and Evaluation, as aspects of social interaction that have parallels in the resources of Social Media. The features of the components vary in abstraction levels, and those that also serve as Organizing Principles in my taxonomy are bolded.

FIGURE 1.
Hierarchical structure by Hoppler et al. (2022) of the six components we will use to frame social media interactions. The structure of this taxonomy is based on Kurt Gray's guidelines for theory mapping (2017), with three levels of abstraction of the features.



(1) The Actor/The Component of Self

In traditional social contexts, the Actor, the person from whose perspective the interaction occurs, is presented as themselves, bounded by the physical restraints of their body. In a social media context, the idea of the 'Self' becomes less strictly bounded, with peoples' representations of themselves varying from full online personas to de-personalized accounts

with few identifiers. Resource descriptions include their socio-demographic features such as Age, Gender, Location, Cultural Groups they belong to, and descriptions associated with more subjective qualities such as a person's Interests, their Popularity, and even Personality traits. While these are implicit considerations in our traditional social interactions, they play an interesting role digitally, as they are explicit resource descriptions associated with our profiles which determine how our profiles are algorithmically presented, yet most platforms store these resource descriptions at a level of visibility inaccessible to the user.

There are also dynamic features to the Actor, such as their **Usage Motivation**, which may be difficult to capture through digital techniques yet serves as the origin of our top-down taxonomy. It is logical that a user who wants to connect *socially* to their small circle has a different motivation from someone seeking *entertaining* escapism, though by hosting both capabilities on their apps, platforms have an extra challenge of decoding a user's intent in logging on.

(2) The Partner Component of Social Interaction

The Partner is a foundational component without which traditional social interaction cannot occur. In social media contexts, the Partner takes on a new dimension in either being addressed Directly or as an Indirect observer to content posted by the Actor. Due to the indirectness of posting, social media analogues to the traditional Partner are all of the profiles of the people within the user's network — this could be a much larger group than the Actor realizes, and users who value privacy may prioritize organizing their social media interactions by the principle of **Directness**.

Another way to protect one's privacy in interactions is by using the principle of **Publicity/Privacy**, which categorizes social interactions into those that are Public, such as *posts*, *comments*, *likes*, or *follows*, and those that are Private, such as *direct messages*. Private message interactions may further be organized by **Number of Partners** into those which are *dyadic*, between two people, or those between a larger *group* of Partners. These principles influence aspects of interactions such as intimacy and affect.

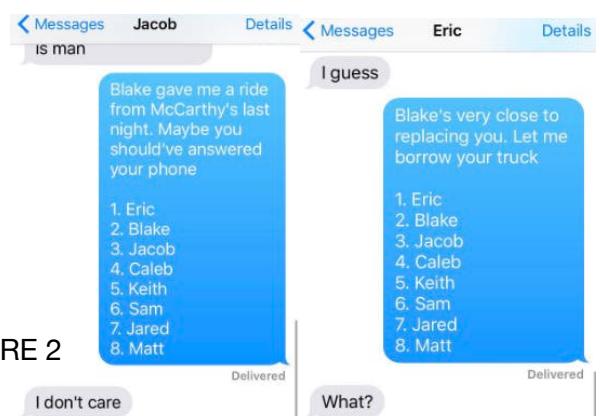
(3) The Relation Component of Social Interaction

Hoppler classifies Relationship, Dominance, and Closeness as features of the Relation Component. These dynamic resource descriptors are rarely ever made explicit through social media profiles (MySpace used to allow you to publicly rank your closest relationships), but are not difficult to discern from raw usage data as platforms capture interaction traces such as time spent viewing a profile, amount of times a profile was viewed, and connectedness within network. Though the scope of this case study does not include analysis of the data techniques employed by social media companies to assess Relations (partly because they are protected as company property), they do nonetheless play a role as description resources associated with our profiles. See Figure 8 (page 7) for an example of social network analysis that captures relationships as vectors between nodes.

FIGURE 2. This meme illustrates the absurdity of the MySpace feature which allowed for the ranking of friends. The humor is a result of the cognitive dissonance from making explicit the traditionally implicit components of social interaction, such as Closeness or Evaluation (6th component).

Source: the Daily Dot

FIGURE 2



(4) The Activities Component of Social Interaction

Hoppler defined the Activities of Social Interaction as Act, Interaction Mode, Physical Contact, Quality, Anticipation. Social Media redefines these, altering the scope of Interaction Mode to only digital interfacing, reducing possible Acts to only those afforded by the apps, and eliminating Physical Contact or Anticipation. Consequences of such reductions in the scope of social interaction include an over-reliance on the few features available —such as liking, commenting— and a reduction in traditional social practices without digital analogues.

An organizing principle in my taxonomy by which a user decides which activities of social media to participate in is **Content Motivation**, which categorizes content into *Image-based* and *Interest-based*. These motivations refer to content as either being posted for vanity or due to actual interest in the topic; think of Selfies versus Poetry. This is, however, a reductive model that is perhaps overly judgmental as a description that cannot really be made objectively — that is why the taxonomy does not have a parallel principle called Partner's Content Motivation on the Consumption end of the spectrum. Nonetheless, it serves as a distinction in the different motivations of content people post, which has a huge impact on the quality of their interactions.

(5) The Context Component of Social Interaction

Context is often said to be a lost art form in the Digital Media age. This could be a result of the lack of salient Context features such as Event, Setting, Surroundings, or Frame, which are somewhat preserved in direct online communication but are especially lost as a media is shared more and more times. While some context features such as Location or Day time can be encoded as a visible part of a social media post, the general consequence of this lack of context is a high likelihood of miscommunication/misunderstanding.

FIGURE 3. Elon Musk's Planetary 'Context': Twitter recently implemented a modification to its metadata that includes from which planet a tweet was sent. Though this level of granularity seems arbitrary (where else would you tweet from?), this is an intentional decision by Musk in anticipation of his own space travel endeavors. Though he warns fans of manipulation by the media, since his 2022 acquisition of Twitter he himself has leveraged the capabilities of the social media corp to its full capacities in an attempt to curry favor with the public and manipulate criticisms.

Source: twitter.com

(6) The Evaluation Component of Social Interaction

Components in traditional social interaction outlined by Hoppler include Desirability, Valence, and Fulfillment of Expectations — these capture evaluations that happen Before, During, and After interactions, respectively. While Desirability can clearly be determined in a digital landscape through comparison of the numerical values of resource descriptors such as Followers or Engagement, the other components are less determinable through data aggregation and don't differ too much in digital or traditional communication.

Note that in this section, we discussed social interaction as a framework consisting of components that have analogues in social media features. The following section will refer to 'interactions' in the S&O sense as the different actions/behaviors that are afforded by social media features.



WHY is it being organized — Affordances/Deficits of Social Media Interactions

Having dissected the structural components that make up social interaction, I now present a collection (Figure 4) of typical supported digital interactions, what real-life behaviors they replace, and the consequences of the affordances that these features result in.

FIGURE 4

Interaction	Real-Life Analogue	Allowances	Deficits	Consequences/Effect on sociability
Posting text content (for social purposes)	Voicing opinions	Ability/agency to cultivate a unique voice & find others who relate	No mechanism to curb oversharing	Overall positive transfer of ideas but positivity of posts may decrease over time (ex: Twitter)
Posting an image of oneself (for social purposes)	Being physically present	Putting one's best foot forward	Too much control over how one wishes to be perceived	Lack of privacy, Rising anxieties in self-image
Posting media (for entertainment purposes)	Working in entertainment/media	Wide reach of audience, creative freedom	Not a social activity	Blurs the boundary of viewing people as entertainment vs socially
Sharing another's post	Sharing information with friends	Ability for information and cultural transfer of ideas, allowance for virality	Huge scale for spread of misinformation	Lower originality in exchange for higher global consciousness
Like/Reaction	Positive body language	Express fondness or alliance with minimal intention	Low effort required + vagueness of meaning	People comfortable with substituting meaningful interactions for 'likes'
Commenting	Giving verbal feedback	Ability to publicly share opinions/support	Not all feedback may be positive (bullying)	Boundaries blurred when private exchanges are displayed publicly
Messaging Directly	Having a conversation	Real-time communication over distances, ability to take time to craft responses, ability to have multiple conversations at once	Difficulty of maintaining conversational flow, lack of physical conversation cues (ex: difficulty picking up sarcasm)	Despite these consequences <- i think that direct communication has less effect on sociability than parasocial or public posting
Following a user	Befriending someone	Ability to broaden network, explore the personalities they wouldn't meet IRL, stay up-to-date with friends' activities	Privacy concerns	Warmer social affect, false sense of familiarity
Unfollowing/unfriending	Breaking up with someone or losing contact with a friend	Ability to remove someone's access to one's personal info	Harsh & lacks explanation	Colder social affect (lack of empathy/communication)
Consuming social media	Being social	^... and more	^... and more	Mis-calibrated social comparison, rising rates of loneliness, decreased sociability in Americans

HOW is it organized — Individual Choices

The previous section outlines some interactions at a lower level of abstraction than that of Hoppler, allowing for precise analysis of the different consequences afforded by interaction features. Interactions such as these, in different combinations, make up the scope of social media platforms and determine their niches/uses. Their differences fall on a spectrum of principles which deliver different valuable features, which may guide individuals' choices of which apps to use for which purposes. Thus, there is no single set hierarchy of most valuable attributes for a social media site to have. Rather, each user's online portrait reflects their preferred online interactions.

It is beneficial to approach this with higher granularity — rather than constructing one generalized hierarchy for all users, we can envision different hierarchies for user personas based on where they individually fall on the spectrums defined by Organizing Principles that are valuable to them.

FIGURE 5. Three examples of organizing principles as a spectrum on which the apps with certain affordances land. Some principles that guide my personal social media habits are Publicity (I don't like having public profiles), Content Motivations (I want to post/see interest-based content), and Usage Motivations (sometimes I want to be social, sometimes I want to be consumptive). By exploring where I fall on these spectrums, I find that I am quite suited for Twitter, Tumblr, or Reddit, while not aligning as much with the principles favored by the affordances of TikTok, Facebook, or Instagram.

The amount of principles by which it is possible to evaluate social media platforms is immense, and though not all made it into my Taxonomy, other principles of note are: Anonymity, Allowance for Discourse, Originality of Content, Usage within Network, Programmability, and Dopamine Rush level.

That last principle, of how much Dopamine is released by the use of the site, is related to the tradeoff that forms the left-to-right classification of interactions in my taxonomy from **Consumptive** to **Sociable**. This tradeoff illustrates the ironic problem with social media, which is the diminishing sociability of users associated with media over-consumption.

FIGURE 6. The Tradeoff that I believe to make up the largest problem in social media — The blurring of the boundary between the Social and the Media, and users' propensity for over-consumption.

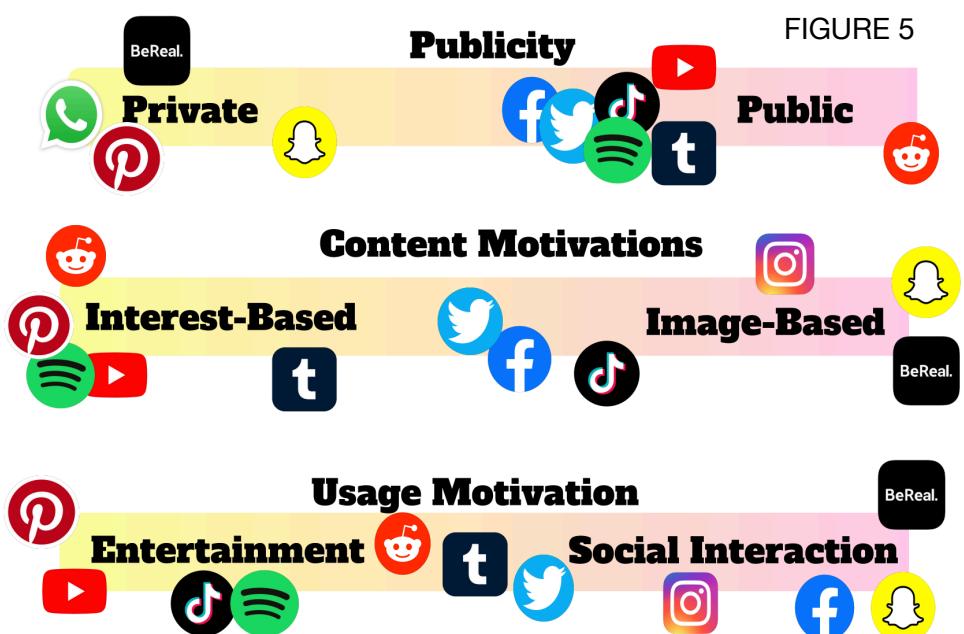


FIGURE 6



HOW is it organized — Taxonomy of Social Media Features for Interaction

Having explored the different approaches to and components of social media, I present below a taxonomy of Social Media's Functions for Interactions based on the typical organizing principles (in the grey boxes) that guide a user's behavior (Figure 7).

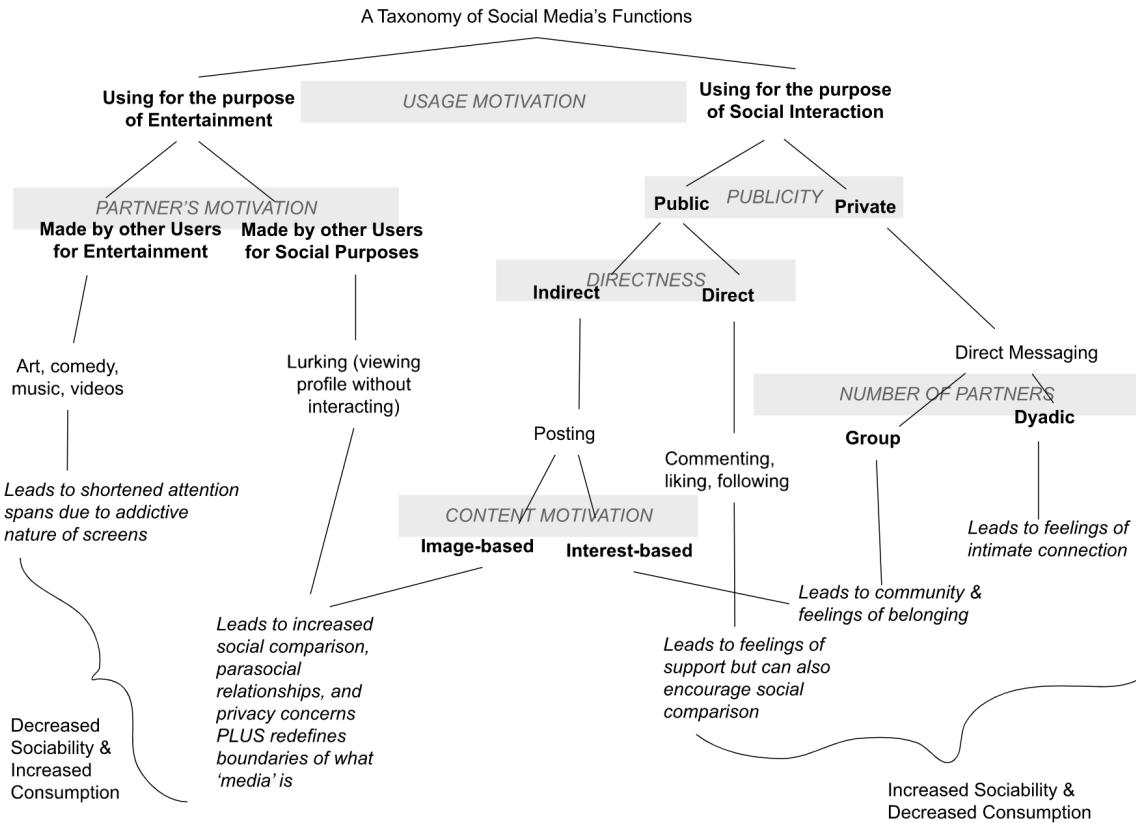


FIGURE 7. A Taxonomy of Social Media's Functions.

This guide for interactions (which are unbolded, unitalicized) follows a top-down structure from the principle of Usage Motivation down to the consequences of different online behaviors (italicized). The further left the interactions are placed, the more they align with the 'Media' aspect of Social Media, with increasing Sociability and decreasing Consumption towards the right side of the figure.

Though the figure may not be a practical tool for actually selecting a pastime or how to behave online, the flow of interactions as determined by organizing principles paints an image that highlights far-reaching consequences for minor changes in behavior. At the scale of all users, this model suggests that a generational transition towards using digital media as a medium for social interaction could wreck the social development of youths while exacerbating trends of internet addiction.

How Social Media sites organize us & Other Considerations

While this case study's scope was how Social Media is used as an organizing system for interactions, it is also important to remember that data analysis techniques are used by social media sites to organize us.

The design questions from this perspective are particularly interesting as social dynamics are a facet of social sciences that are often difficult to quantitatively measure. These include questions about Individual Social Actors (Who are the most popular individuals in a network?), Overall Network Structure (What recurring network patterns are related to social outcomes of interest?), or about Network Dynamics and Flows (How can information propagation be catalyzed or minimized?).

Though most social media data aggregation techniques are proprietary and invisible to the user, we interact with their results every time we log on; for example, in the highly specialized algorithms that present valuable content to users.

FIGURE 8. Facebook social network visualization. Each node is the profile picture of a user, with vectors serving as connections within the network. [Source: Katherine Ognyanova](#)

Besides the political implications of what can be done with information mined through social media data traces (explored in last month's Congressional hearing with TikTok CEO Shou Zi Chew), the abstract ability to modulate the behavior of individuals as well as populations is one that should be carefully considered by us as both users of social media and as Bay Area students with the potential to be making these architectural decisions in the future. However, I don't know if there is really a proper incentive for companies to limit the principles encouraging overconsumption because they have proven to be so profitable for the companies developing these apps. The massive scale and scope of social media use globally renders many governmental regulations ineffective. Applying an S&O framework to the structure of Social Media can thus illuminate patterns associated with modern communication through digital media.

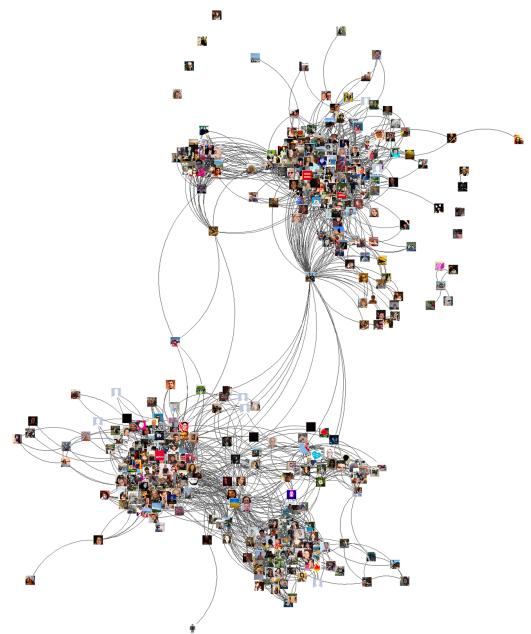


FIGURE 8

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