

# Opening the Black Box of Matching Facilities for E-business Websites

## Abstract

Firms across industries, irrespective of their size, are becoming increasingly dependent on the Internet to allow them to connect to their customers, be it through websites, e-mail, or social media. Social media has become an especially lucrative option for these firms owing to the possibility of not only reaching out to a wide audience through broadcast messages, but also the possibility to hear back from this audience. As a result, scholars have termed social media as a 'matchmaker' between firms and their current and prospective customers. The intent of this thesis is to 'open the black box' of these 'matching facilities' that connect e-business websites with their potential customers, and to provide a nuanced understanding of what 'reaching out' to an interested audience on social media entails.

Since social media as a context implies that the *social* and the *material* are fundamentally co-constitutive, a sociomaterial lens is used in this thesis to understand the affordances offered by social media to e-business firms. A review of extant literature on social media affordances reveals that, hitherto, scholars have espoused a notion of affordances which are static, dyadic and proximal. Here, static implies that affordances pre-exist the action of a user, dyadic implies that affordances are actualized in the relationship of a user and a technological object, and proximal implies that the affordances require proximity between a user and a technological object to actualize. However, certain social media affordances may be more complex, due to their being dynamically actualized in action, their actualization involving multiple human and material agents, and/or their actualizing even when the user is at a distance from the technological object. Hence, this thesis proposes a shift from the substantialist metaphysics in

which extant literature on social media affordances is entrenched, to a process metaphysics that can allow a better understanding of these complex affordances.

Fieldwork for this thesis was conducted at a small entrepreneurial e-business firm to understand their social media practices, especially on Facebook – a social media platform – and draw insights about the use of Facebook as a ‘matching facility’ to connect with interested audience. The ebb and flow in the confidence of the firm on the use of Facebook as a medium for reaching out to this interested audience further motivated this study. Actor-network theory (ANT) was used as a methodological and conceptual device to not only carry out fieldwork, but also to analyze the data collected. ANT was considered specifically appropriate for this thesis since it (i) follows a relational, process-oriented philosophy, (ii) does not consider agency the sole privilege of humans, but also allows non-humans to wield agency, and (iii) provides conceptual categories to understand action at a distance.

‘Opening the black box’ of Facebook, this thesis explicates technological affordances that allow marketers at the firm to reach, engage with, and target the firm’s potential customers. In doing so, firstly, this thesis illustrates the process of *becoming* of an affordance on the social media platform, involving the collective enactment of agency by multiple human and material agents that are not necessarily co-present. Secondly, this thesis highlights the role of algorithmic agents, a special class of material agents, in actualization of affordances on complex technological platforms. It shows that affordances are *agencements*, that is, collective, ongoing accomplishments of diverse actors, some of them co-present physically, and others distant but co-present through translated representations. In this way, it illustrates how human agents are able to act at a distance through a complex enactment of diverse agencies. Lastly, after analyzing the becoming of affordances on social media platforms, this thesis also tries to quantitatively understand the dynamics that led to undulations in organic reach experienced by the focal firm. Using System Dynamics, this thesis models the structure that results in firm’s effectiveness

rising and falling when using Facebook for reaching out to interested audience. By providing an endogenous explanation for the experience of the firm, this thesis also delineates how certain managerial levers that drive algorithmic and human agency can be used to affect a more desirable behavior of the social media platform when firms use it to reach out to individual users.

This thesis contributes to the current theoretical understanding of affordances in general, and social media affordances in particular. Firstly, it makes a case for an ontological shift in affordance studies from a substantialist emphasis towards process orientation. Secondly, it suggests a methodological departure from the current interpretive studies that espouse a process based view, towards the use of ANT that allows exploring the relationships that performatively configure an affordance. Thirdly, it adds to the nascent, but developing repertoire of social media affordances by identifying a set of complex affordances, and illustrates the process of actualization of these affordances. This thesis also contributes to practice by drawing the attention of business users of social media platforms beyond the affordances designed into the interface of this platform, to the algorithms that run in the backdrop of these platforms, the computations that they perform, and the information that they store. This thesis also highlights levers for designers of social media platforms that can assist in a more desirable actualization of affordances on these platforms.