

RUNNING HEAD: Rathmel_Diffusion

Diffusion from the perspective of tacit knowledge

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“Tacit knowledge is Polyani’s most profoundly revolutionary idea...it is the key to so many doors which without it have proved very hard to open.”

(Scott, 1996, p.60)

One of the difficult doors described in the quote above is the concept of diffusion. In the information transfer model, according to Rogers (1995), diffusion is “the process by which an innovation is communicated through certain channels over time among the members of a social system” (p. 10). Diffusion is a crucial step in transfer of information because it is the point at which we comprehend. Ironically, *diffusion*, as a theoretical concept, can be difficult to comprehend, as it is often used interchangeably with *dissemination* and defined simply as the spread of knowledge. When diffusion is more clearly defined, it is characterized by the comprehension of knowledge in a social context. This paper will look at diffusion by investigating the role of tacit knowledge, arguing that tacit knowledge that is shared works to define diffusion. I will explain how this occurs by examining first what tacit knowledge is and illustrating the function of tacit knowledge within an organization. By showing how tacit knowledge acts as both as a knowledge asset and inhibitor, I will confirm the defining relationship between tacit knowledge and diffusion of information and innovation.

Tacit knowledge defined

The word *tacit* is defined as that which is unspoken, silent, emitting no sound, noiseless, wordless (Shorter Oxford English Dictionary, 2002). Tacit knowledge, then, is what cannot be articulated with words. Like a mother’s instinct, it cannot be written down in a manual. Even if there was a *Mother’s instinct for dummies* book to be found, it is likely to only explain what reactions occur or maybe how a mother feels when her instinct kicks in. All of these descriptors can be vaguely followed, but one only actually masters the skill by going through the experience of motherhood. Learning by doing is another one of the ways tacit knowledge is explained. In Polyani’s philosophy of tacit knowledge (as cited by Scott, 1996), he often used helpful examples, such as

recognizing faces, cooking, or riding bikes, to describe this inarticulate way of knowing. We can do each of these things and at some point actually learned how. But when the knowledge is taught and when it is comprehended (diffused) it is not by concentrating on the rules more than it is by just doing. We all just know how to ride a bike. We even use the saying “it’s just like riding a bike” as a metaphor for all kinds of skills that come naturally, or that don’t require re-learning. Reflecting on Polanyi, Scott puts it this way:

So here is a real kind of knowledge in which we rely on awareness of details we can’t specify or check in any scientific way. Sometimes they can be specified, like the rules for keeping your balance on a bicycle, but success in the art does not involve knowing the rules, and in using the details success depends not on concentrating on the rules. (p. 50)

Tacit knowledge as diffusion

Tacit knowledge, though inexplicable, is not trapped knowledge. Learning is involved which necessitates doing and that doing requires learning with other people. This describes diffusion according to Rogers (1995), in that it is a “special type of communication in which the messages are about a new idea. The newness means that some degree of uncertainty [tacitness] is involved in diffusion” (p. 6). Just because we cannot describe the process doesn’t necessarily mean that diffusion cannot occur. According to Scott (1996), when the innovation or knowledge is being communicated through certain channels, some channels may be explicit because there are two levels. There are “the parts, details, particular *from* which you attend and the whole meaning *to* which you attend. This is the characteristic structure of tacit knowing” (p. 52). Looking to the previous examples again, cooking and bike riding actually have explicit means of learning. Cooking begins with a recipe and bike riding follow rules of physical law. In addition, explicit words might be used to describe the process and the feelings involved. But the innovation that is actually being communicated remains tacit when it has been diffused. So, beginning with tacit knowledge eventually ends up with tacit understanding. Scott continues to explain tacit knowledge as diffusion in this way:

There is throughout the whole range of knowledge, tacit and explicit, this same structure -- scattered meaningless particulars being converted into parts of a meaningful whole by a change of focus. That is,

you can stop attending to them and start attending from them to a whole or a joint meaning which at first you only vaguely sense. (p. 57)

This tacit diffusion as a cycle in itself involves taking another's tacit information (perhaps explicitly disseminated and organized) and making it someone else's tacit knowledge. Since diffusion occurs among social systems, making the knowledge one's own is a shared experience.

Using tacit knowledge to describe diffusion specifically fits the definition by Rogers (1995) in regards to intentional – sometimes accidental – spreading of knowledge, usually through contact through certain channels over time. Since diffusion is a concept to describe a point of a process, using context to describe it is more effective than a definition alone. Reading and rereading the explicit definition, even comparing dissemination and diffusion is not enough to make it clear. Only by putting it in a context can it be understood more fully. This is why the definition of diffusion includes the social aspect. Tacit knowledge, when shared, is social in a way that explicit knowledge is not. Explicit only means that it can be verbalized, which more clearly fits a definition of dissemination, or distribution. Whereas, tacit understanding is the inexplicable point of comprehension and meaning.

Tacit knowledge and diffusion in organizations

Understanding how tacit knowledge mirrors an understanding of diffusion helps to realize why organizations view tacit knowledge as an asset. Organizations recognize that cookie-cutter approaches to knowledge and innovation are no longer as effective as creative thinking and diversity. Systematic structures for approaching knowledge are changing. As Statti (2003) points out, “people's organizational skills and the social interactions within which they work is not always explicit, formalizable, or even apparent” (p. 53). Kosonen & Kulkki (2001) add that the globalization of knowledge requires “increasing diversity, tacitness, and contextual embeddedness of knowledge” (p. 250). Organizations rely on and desire to capture and exploit knowledge assets of all types to

achieve diffusion of innovations. Tacit knowledge is one of these knowledge assets, valuable because it is effective and because it is inherent.

Tacit knowledge is valuable to an organization to an equal degree that explicit knowledge is because the two work together for much of learning. A simple example of this is seen frequently in new training experiences in organizations. While there may be an explicit manual detailing each step of a new process, usually it is the simultaneous learning by reading *and* doing that allows for the diffusion of the new knowledge. A new employee can learn much faster while doing than if she were to sit and read a manual of instructions until it made sense enough to then try doing the new task alone.

Yet, what is intriguing about tacit knowledge for organizations can also be the most challenging to make explicit. This kind of pure tacit knowledge is similar to aesthetic knowledge, such as creating and appreciating art. As John (2001) states, “art is one of the phenomena which shows traditional models of propositional knowledge to be inadequate” (p.339). Organizations that promote people to develop intuitive decision-making and risk-taking agree with researchers that “aesthetics are an important resource for studying the role of such factors as creativity, surprise, interest, and choice in the emergence of new ideas” (John, 2001, p. 340). Some organizations credit the recognition and utilization of diverse personality models for their innovative successes. Blumentritt & Johnson (1998) recognize the tacit value of long-serving staff as a structure designed to contain and store knowledge of three categories: personal knowledge (potentially accessible to the organization); acknowledged personal knowledge (organization knows who to go to for the knowledge); and organizational knowledge (company establishes its own knowledge and it is accessible to staff in various ways).

The challenge is how these tacit assets are captured. How do organizations, as Blumentritt & Johnson (1998) propose, “transform tacit knowledge into some explicit codified form in which it can be transmitted, and its value captured more easily” (p.101)? Donaldson (as cited in Stati, 2003) cautions that the ineffability of tacit knowledge leads to a “remagnification of organizations” which results in a “mystification of the organizational world”. Taken to the extreme, personal knowledge can become too individualized and therefore inaccessible and

purely tacit knowledge runs the risk of being too vague. Both of these are examples of how tacit knowledge can be seen as an inhibitor to diffusion – when it cannot be made explicit. However, Strati (2003) points out that there are methods of organizational learning that take place for which traditional cognitive theory has not widely accounted. The goal does not have to be explaining all tacit knowledge, or making all tacit knowledge explicit. Rather, it is to emphasize its role in diffusion in the social context. As McElroy (2003) suggests, we should seek to “accept and embrace the natural knowledge proclivities of human social systems [rather] than to ignore or supplant them with managed alternatives of an artificial kind” (p. 142). It has been shown that tacit knowledge can be diffused through explicit means. In the cases where tacit knowledge has no explicit means, perhaps the key will be to begin to understand the value of tacit knowledge so at the very least its value will be diffused.

Concluding implications for libraries

Chiefly dedicated to the value of information are library and information professionals. Libraries are a work organization focusing hard to capture knowledge assets in order to provide better services for the user. Library and information professionals recognize that the way users approach information is much more tacit and they care about meeting that need. This has also proved challenging because the existing structure and organization of libraries in many ways conflicts with this emerging tacit approach. Browsing is a specific example of how information seeking can differ from a cognitive, linear, and systematic approach to a more tacit approach. Searching for documents without a topic in mind is also unquantifiable and inarticulate in the same way that tacit knowledge is. Browsing is a means for accomplishing discovery of knowledge that standard formal systems do not adequately provide (O’Connor, 1993). For example, in researching for this essay, I found something by looking in an unrelated field. I can’t explain why that seemingly unrelated information filled my knowledge gap. That gap, the method for filling it, and the “aha!” moment of making a connection are all examples of tacit knowledge in the process of diffusion.

Providing systems that value and encourage new ideas and creativity within organizations, being sensitive to change, and recognizing the diversity within information transfer will provide greater understanding for knowledge users and will foster more effective communication. By recognizing what can become diffused explicitly and what must be diffused tacitly, we can develop better methods for meeting a variety of knowledge needs. Libraries are moving away from forcing the user to be primarily explicit with their information needs, (to know the correct form of entry, to articulate searches by author or title) and are providing more tacit structures to capture the value of and meet the diverse information needs. To answer the question posed by Achleitner (26 Nov, 2003) whether “dissemination = distribution; organization = access; diffusion = comprehension, and does each imply a different value that is commodity level” – yes. Diffusion proves to have a multiplicity of values at the commodity level. Valuing new ways of thinking, like tacit knowledge, is the beginning of diffusion of innovation and will continue opening the many doors through which we may further explore information transfer.

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