

## 2 From Lurker to Active Participant

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## 2.1 Introduction

For the purposes of this chapter and section, we conceive of a Learning Network as a particular kind of online social network that is designed to support non-formal learning in a particular domain. The ‘social’ implies that we will focus on interactions between people, the ‘non-formal’ that we will not assume the presence of cohorts, curricula, etc. A Learning Network thus becomes a rather haphazard collection of people who share an interest in a particular topic about which they want to further educate themselves professionally or privately. These people, we assume, do not know of each other’s existence. In actual fact this may be different, they may be accidental or even deliberate acquaintances, for instance if they decide to join as a group. However, for the case of the emergence of sociability, we’ll take the worst-case scenario of a collection of unconnected individuals. If sociability can be made to emerge in an environment that resembles a social desert, it always will, is the argument.

This implies that a Learning Network may not be equated with a kind of community. Over time, a Learning Network could develop community-like character-

istics. Indeed, we argue that it should in order to maximise its utility. After all, there is much to be gained for the inhabitants of a Learning Network from the mere fact that they all share a particular interest, which is specific to this Network. These benefits may materialise in two different ways, already distinguished in 1973 by Mark Granovetter in a seminal paper (Granovetter 1973). If one thinks of social communities, the mental image is mostly that of a close-knit community in which everybody pretty much knows everybody else. Ties between people in such communities are strong, in the sense that they interact frequently and intensely. Although this is a virtue in that social interactions run smoothly, it is a vice in that knowledge not available inside the community will for ever elude its members. In the words of Granovetter ‘strong ties, breeding local cohesion, lead to overall fragmentation’ (p. 1378). To access others outside the local community, weak ties have to be exploited, or ‘weak ties ... are ... indispensable to individuals’ opportunities and to their integration into communities’ (p. 1378). In line with this observation, it is our central thesis that a Learning Network, being devoid of communities in its incipient phase, provides ample opportunities for community emergence and growth, and hence the establishment of strong ties, through the exploitation of the many weak ties it harbours. In the end, therefore, we view a Learning Network as consisting of many, partly overlapping communities. Through the communities, the benefits of a strong-knit community are reaped, through the overlap, information may flow through the Network as a whole. (See also (Burt 2000; Reagans and McEvily 2003))

In this chapter we will specifically go into the question of how prospective Learning Network users may be convinced of these benefits, for that is likely to be the necessary condition for their active participation in any Learning Network. Their question would be ‘Why should I participate?’, this chapter inventories answers to that question, which are then translated into a few guidelines for those contemplating to set up a particular, topic-bound Learning Network. Two kinds of answer are distinguished. Proximate answers, which affect the decision to participate here and now; and ultimate answers, which motivate participation, but only in the long run, after the decision to participate has already been taken. Both are important, the former to persuade people to participate, the latter to persuade people to keep participating. Before going into them, we’ll introduce a concrete example to add some realism to the discussion.

## 2.2 The Moto Guzzi V7 Enthusiasts

Eddy LeDuca is 38 years old and recently bought an old Moto Guzzi V7 from 1972. To restore it in its original state and make it operational again, he wants to learn how to go about that. From a colleague he got wind of an online vintage motorcycle network. In it he hopes to learn some tips and tricks for renovating his newly-bought vintage Guzzi V7.

Jannie Barends is 62 years old and enjoys an early retirement. She bought a brand new Moto Guzzi V7 back in 1972 and now owns twelve motorcycles, all collectors' items. Since the Guzzi was her first motorcycle she is very attached to it and does everything she can to keep it running. She has a whole library of manuals on how to maintain, rebuild and repair motorcycles, and is used to exchange information with other motorcycle fanatics.

Bas Timmer is 23 years old and works as a car mechanic at 'Stop and Go', a franchise specialised in small car-repairs that are done while you wait. He has the ambition of running his own garage in the near future. By way of preparation, he surfs the Internet and visits online discussions and fora on cars and motorcycles. He wants to keep his knowledge up to date and stay on top of what lives among the car and motorcycle amateurs. In the business plan for his own garage he wants to include services that match the needs of the amateurs.

Jessica Zwart is 41 years old and works for the research and development department of Moto Guzzi. She is an experienced person. Ever since the advent of the Internet, she became an active member of all kinds of Moto Guzzi discussion fora. Like Bas, she uses them to keep informed about what lives among owners of vintage motorcycles, Moto Guzzis in particular. Her regular posts are intended primarily to gauge customer satisfaction, and test new research and development ideas.

Eddy, Jannie, Bas and Jessica all share a passion for vintage motorcycles. In one way or another, Eddy, Jannie, Bas and Jessica are really all lifelong learners who - from their various perspectives - want to expand their knowledge about vintage motorcycles, in particular the Moto Guzzi from 1972. Wouldn't there be a better way to serve their interests than is done currently by rather haphazardly surfing the Internet and, every so often, engaging in a discussion forum? Joining the Learning Network on vintage motorcycles seems to be a good idea, but what would be convincing arguments to them?

## 2.3 The Long-Term Perspective

Arguments to convince Eddy, Jannie, Bas and Jessica should refer to the ways in which each one of them personally benefits from sharing knowledge with the other participants in the vintage motorcycle Network. For Eddy, this would relate to his ability properly to renovate the bike, for Jannie the ties she develops with fellow-enthusiasts, for Bas the insights he gains in how to set up his own bike shop in due time, and for Jessica the user feedback she receives. These all refer to motives for participation the beneficial effects of which reveal themselves in the long run. Such motives come in a few kinds.

First, note that the reasons why knowledge is exchanged in some Learning Network may range from purely educating oneself, such as done by Eddy and perhaps Jennie, to developing oneself professionally, such as done by Bas and

Jessica. Thus the use of a Learning Network extends beyond the educational realm into the participants' professional life, present and future. A Learning Network qua knowledge sharing community thus acquires characteristics of a community of professionals. Particularly to someone such as Bart this is very significant. While learning about vintage motorcycles, in his case particularly the Moto Guzzi V7, he comes in contact with many people, such as Jessica, who will be useful to him in his future professional life as a bike shop owner. This applies generally. The communities of learning that arise in a Learning Network may acquire characteristics of communities of professionals (Brown 2001). As argued, typically learners in a Learning Network combine their need to learn with the necessity to work. Indeed, their learning needs often derive from their occupation. So there is every reason to expect that the communities that arise in the Learning Network will acquire this dual nature of a learning community and a professional community (Longworth and Davies 1996).

Second, as has been pointed out by Nardi (Nardi et al. 2000), it has become less productive only to rely on knowledge sources within the company you happen to work with. Such sources have become less reliable and less accessible with the increased turnover rate of personnel and indeed companies themselves. If your company is a constant state of flux and you yourself are in constant danger of being replaced or even losing your job, it is much more productive and sensible to rely on your own, personal network, a type of network she describes as *intentional*. (This kind of network, parenthetically, shows remarkable resemblance with the ad-hoc transient communities discussed in Chapters 4 and 5) This makes you as a person less dependent on the company you work for. In addition, the chances of accessing novel information are increased since you step out of the probably close-knit group you are part of (Burt 2000; Reagans and McEvily 2003).

Third and focussing specifically on the act of learning itself, there is ample evidence that collaboration and a social setting significantly improve learning effectiveness and learning efficiency. By collaborating with others, learners make use of their collective intelligence, motivate and enlighten each other and thus improve their learning outcomes (Allen 2005; Cartney and Rouse 2006; Chapman and Ramondt 2005; Keppell and Au 2006). Some will say they have become part of a community of learning (Wilson and Ryder 1998). In educational circles, this is a familiar argument, which goes back to the ideas Vygotski (1978) or even Dewey, back in 1916 (Dewey 1916). Related to this but different from it is the argument that helping others in a learning context, that is acting as peer-tutors, is a powerful learning experience in and of itself (Fantuzzo et al. 1989; Wong et al. 2003). (See for more details Chap. 4.)

Therefore, we have uncovered two kinds of reasons for participating in a Learning Network: it benefits you as a professional, prospective or actual, and it improves your learning. These benefits materialise in the future as a consequence of your having been active in the Network. Guidelines for Learning Network designers will have to consider this long-term character. They should point out these benefits to the novice users of a Learning Network, perhaps through accounts of

successful participation of past and present users. Guidelines thus take the form of information about and explanations of benefits. These may convince people to 'give it a try'; they will not convince them to change from passive onlookers into active participants. Although there is a role for such 'lurkers', see Preece et al. (2004), a Network of only lurkers will rapidly lose its attractiveness. So how can lurkers be convinced to contribute actively?

## 2.4 The Short-Term Perspective

To investigate the question of why some Learning Network participant would decide actively to participate in it, consider the following situation. Eddy, having taken apart the fuel system of his Guzzi V7, finds out that he is hesitant about the exact way in which to reassemble the carburettor. The manual he has shows an exploded view of the carburettor, but his seems to be a slightly different model. Perhaps some of the V7s were fitted with a different model? He decides to seek help. Suppose, a mechanism is in place that allows him to target specific people in the Network who should be knowledgeable about his question. Suppose, Jessica receives his question about how to reassemble his particular make of carburettor. Why Jessica would answer Eddy, is the question. What is in it for her? She might consider to answer Eddy in the hope that next time, when she has a request to Eddy, for instance to gauge his opinion on a new design, he will reciprocate. However, what guarantee does she have he will?

This kind of situation has been analysed extensively in game theory. It is akin to the classical prisoners' dilemma, in which two prisoners facing a long period of incarceration, have to decide either to stay silent about their misdeed or to confess (Aronson and Thibodeau 1992). If they collaborate and both stay silent, their punishment is smallest (say, each 1 year). If one of them talks and the other does not, the prisoner who talks is worst off (5 years); the prisoner who keeps his mouth shut profits by having his jail time reduced to naught. However, if both talk, they are worst off, as both are sent off for 3 years. The best strategy therefore is to join forces and not talk, however, how can the other person be trusted not to go for no jail time at all by talking? The result of the individually most sensible decision ('talk') produces the collectively worst outcome (a total time of 6 years rather than 2). Translated to the example, Jessica should therefore decide not to honour Eddy's request for help for fear of not being helped by Eddy later on with her request for help. And indeed, what guarantee does she have Eddy will reciprocate?

The predicament can be overcome by repeatedly 'playing the game', a situation which is called the iterated prisoners dilemma. The best strategy to follow, simulations have shown, is the tit-for-tat strategy: always cooperate on your first move (help Eddy) and then copy the last move of your opponent (if Eddy failed to reciprocate, Jessica will not help him next time around, if he did, so will she) (Axelrod 1984). The simulations Axelrod carried out for this situation, however, show that a

few conditions need to be met for this to work. First, participants need to be identifiable, i.e. have a persistent identity, even if it is a pseudonym. Second, there may be no, to the participants known ending to the ‘game’. If there is, the players do not have a means of punishing defection behaviour (i.e. cheating on your opponent), so the rules of the one-off prisoners dilemma apply to the last move. However, now they are unsure about their last move, by the same argument they also are about the one but last move, and so on, down to the present move. Third, even though the value of future encounters may decrease relative to the present one - for all you know, there may be no next encounter - the decrease should be limited. Otherwise, if there hardly is a future we are back again at the one-off prisoners dilemma.

It is important to notice that, if the conditions discussed are met, Axelrod’s simulations show that cooperation will arise and spread spontaneously in many cases. Even if only a small percentage of a group plays tit-for-tat (about 5%), they can ‘invade’ a group of people who refuse to collaborate. The upshot is that in an incipient Learning Network in which the conditions just discussed obtain, collaboration will occur. Only some inhabitants will have to be willing to take the risk of answering a question without guarantee of reciprocation. Obviously, guidelines for a Learning Network designer pertain to implementing Axelrod’s criteria and keeping the investment needed actually to honour a request for help as low as possible. Chapter 5 discusses an experiment in which this has been done. Although the details will differ from Learning Network instantiation to instantiation, it will not be difficult to prevent people from changing their identities or a Network from ending at a specific date. It is more difficult to have the future cast a sufficiently large shadow into the future, as this has to do with frequency and intensity of contact and size of the Network. No clear-cut guideline may be given therefore.

Although collaboration should arise spontaneously according to a game-theoretical analysis, thus almost pre-empting the need for mechanisms that spur people to collaborate and answer questions, analyses have been made of such mechanisms for different contexts. These hold promises for collaboration in Learning Networks too. We are referring to Stephen Weber’s investigation of the mechanisms behind the success of *Open Source* communities (Weber 2004). Like Learning Networks, these communities are in their beginning stages loose-knit and often rely on large numbers of contributors. What motivates them to contribute their source code without any chance of financial recompense, Weber wondered. Of the several mechanisms, he suggests two apply to Learning Network.

First, there is the desire to produce a thing of intrinsic beauty. Although this may be hard to grasp for a non-programmer, it is similar to what one experiences when writing a gripping story, delivering an elegant mathematical proof or cooking an exquisite meal. It has to do with professional pride, something that is hard to experience when producing proprietary software. One should realise that software code is hidden from inspection once the code is compiled, as is necessary to

turn it into code that can be executed on an actual computer. Therefore, if the software is proprietary, nobody will ever see it as it is screened off from inspection by trade secrecy, effectively robbing a programmer from the praise from others that may feed his pride and satisfaction as a professional. As open source code can be inspected by anybody, particularly professional peers, the situation there is completely different. This motive translates to a Learning Network as the pride someone puts into honouring a request for help. Going back to Eddy's carburettor, Jessica could do a quick and dirty answer by pointing to a page in some manual she owns, trusting that Eddy will find a way of accessing it. Or she might write a more elaborate answer, clarifying to him some of the abstruse elements in the manual, a scanned image of which she includes.

Second, now that the code is accessible by everyone, it also provides the programmer an effective means of self-promotion. Anybody, including potential employers and clients, can assess the quality of her work and on the basis thereof decide to hire her. Of course, this motive builds on the previous one. After all, an elegant piece of program code better supports the aim of self-promotion than would a bad instance. This too easily translates to Learning Networks. Jessica has a stake in an answer that is clear and complete. Others who see it will immediately appreciate its quality, something that increases Jessica's reputation as a professional in the Network. And from this, she will profit when she herself needs help with the assessment of the user appreciation of, say, a new design for a Guzzi saddle.

Both examples of incentives that apparently motivate computer programmers to share their code with others will provide incentives to Learning Network participants to honour requests for help. The sense of pride that attaches to having provided an elegant answer and the concomitant benefits to someone's reputation, will obviously only come about if the answer is publicly available. Again, how this translates into guidelines for a specific Learning Network depends on the Network in question. A publicly available, instantly updated list of question asked would be a means. Chapter 5 discusses an experiment with question answering in a Learning Network. In this case, no list of questions asked was provided. However, several people, thus providing a modicum of exposure, discussed questions in wikis. The set-up could however easily have included a list of questions asked and answers given.

A third, rather obvious mechanism to keep in mind, relates to the costs someone incurs who wants to honour a request for help. Such costs consist of two parts. The transactions costs are the effort needed to access the question and process the answer. They need to be added to the material costs of providing the answer itself. Obviously, much is to be gained by keeping the transaction costs low, at the very least their perception. Having to drop a request for help in several, generic fora and then having to check them regularly for an answer, obviously generates high transactions costs. Using RSS feeds to keep a tab on these fora already would lower the costs, etc. Generally, technical solutions will significantly help lower such costs. Perhaps surprisingly, the costs of actually providing an answer can also

be lowered by technical means. In the experiment discussed in Chapter 5, participants who have indicated to be willing to answer a content-related question are guided to a wiki, which is seeded with text fragments that pertain to the subject in question. Jointly editing these fragments is a significant reduction of effort compared with thinking up an answer all, individually (Van Rosmalen et al. 2008).

## 2.5 Conclusion

Learning Network participants will somehow need to be convinced that it is in their interest not to stay lurking and become active participants. Although there are sound ultimate reasons for them to do so – they maximise their profit from the Network both in terms of their professional development and in terms of their learning achievements – they still need to be convinced to honour this specific request from this specific person at this specific moment of time. If the conditions for an iterated prisoners' dilemma apply, collaboration should actually arise spontaneously. However, motives that are more powerful apply. An analysis of the motives that drive programmers to write open source code, revealed two direct motives, the desire to create a thing of beauty and the possibility to contribute to one's professional reputation.

Of course, it remains to be seen whether this suffices. Perhaps elaborate reward and punishment systems are needed. Whatever the case, it is almost certain that what works and does not work crucially depends on the kind of Learning Network to which these guidelines are applied. They will need to receive a local interpretation and instantiation.

In addition, the analysis was deliberately done for first-time users of a novel Learning Network. However, typically, novel users will enter a Network that has been around for a while. Thus, they do not encounter an unstructured whole, but rather a patchwork of communities, which each already address several, slightly different topics within the overall framework that the Network is about. So over time in the vintage motorcycle Network certainly community-like grouping will have emerged that, for instance, as in the case of Moto Guzzi V7. The presence of such a structure will certainly make it easier for first-time users to decide to change their lurking behaviour and become active participants in some specific community. As a Moto Guzzi enthusiast, it is more rewarding to enter into a discussion with fellow enthusiasts Eddy, Jenny, Bas, or Jessica than with someone who is of a different persuasion. How such communities may arise and be maintained is discussed in the two chapters to follow.



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