

Teens and blogs network An online community emerging from a teenage gang

Cédric Fluckiger

► To cite this version:

Cédric Fluckiger. Teens and blogs network An online community emerging from a teenage gang. Colloque International AOIR, Oct 2008, Copenhagen, Denmark. hal-01172257

HAL Id: hal-01172257 https://hal.univ-lille.fr/hal-01172257v1

Submitted on 8 Jul 2015

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers. L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Teens and blogs network An online community emerging from a teenage gang

International Congress AOIR – Copenhagen - 2008

Cédric Fluckiger Théodile-CIREL EA 4354

Introduction

New communication tools at disposal of teenagers renew the forms of the progressive emancipation towards family that results in the adhesion to youth culture and the appearance of teenage forms of sociability (DE SINGLY, 2006; PASQUIER, 2005). For some years, French teenagers massively adopted blogs as a social media. Indeed, for teenagers, blogs provided by the Skyblog platform take the form of a massive generational phenomenon. Through blogs, teenagers aim at staying in touch with their close friends, more than expressing their intimacy or sharing a hobby with unknowns (FLUCKIGER, 2006). Teenage Blogs are typical of "continuous communications", one of the four type of blogs in the sociological typology of personal blogs (CARDON et DELAUNAT, 2006; CARDON *et al.*, 2007) The rapid growth of the relational practices related to blogs encourages to question the uses.

Joining a teenage gang goes along with the development of the technical skills necessary to use the most widely spread interpersonal communication tools. This implies a kind of appropriation of these tools. Although, adopting instant messaging, webchats or blogs is never an individual process concerning a single teenager passively adopting a technical tool. Appropriation cannot be only seen as the individual side of the generational diffusion of this tool, but rather as a dynamic collective process. This can be analysed as a collective *instrumental genesis* (RABARDEL, 1995), combining instrumentation et instrumentalisation

This communication aims at examining the links between these practices of relational blogging during adolescence and the evolution of teenagers' sociability. How do youth's virtual communities match with face to face communities? To what extent are such dematerialized communities rooted in an actual location and shaped by "real life" social relationships? In which ways the adoption of a youth culture intricates with the use of relational tools implying a change in the individuals and group sociability and social activities?

The purpose of this paper is to detail the mechanisms of the collective appropriation of blogs by examining the process of construction of the blog network of a group of pupils aged 14 to 16 years old. The point of view adopted in this paper is to enrich comprehensive sociological analysis with social network analysis approaches. The theoretical approach is rooted in youth sociology theories of individualisation (DE SINGLY, 2006). These theories are enlightened by the new possibilities offered by the virtual communities' analysis, such as the possibility to materialize and graphically represent social links between community members.

The main argument is that the teenagers' blogs networks are not at first communicating tools, but that they rather become such communicating tools while teenagers are growing older and their needs for an instrumented sociability evolve. Blogs alternately play a role in discovering the youth culture of older teenagers, then allow the construction of its social image for the members of the community, allow the public exhibition of its social capital and finally become a set of communication tools within the social network of grown teenagers.

Methodology

In order to highlight the *instrumental genesis* of blogs, we decided to show the coupling between the construction of the network designed by the teenagers' blogs and the evolution of their sociability, thus focusing our attention on the construction process of this network.

Indeed, every blog indicating a list of "favourite blogs", we can constitute a network of blogs pointing some towards the others. The blogs and social networks may be investigating using mathematical tools or graph theory (CARDON, et al., 2007; CARDON et PRIEUR, 2006; HERRING, et al., 2005; LIN, et al., 2006) However, the methodologies displayed in these structural analyses of blogs networks would deserve to be enriched according to two main dimensions. On the one hand, few researches were interested in the process of construction of the blogs networks, which are often considered as static, already built networks, and not as product of a dynamic process of construction. On the other hand, few researches had the methodological means to confront these analyses with the observation of "real-life" sociability which accompany the digital sociability. However, the analysis of the blogs networks might remain little heuristics if we are not able to qualify blogs, their authors and relations between bloggers, to identify the resemblances and the differences between face-to-face relations and those allowed by digital networks. Our assumption is here that the form of the network of blogs provides useful information, making it possible to recall the stages of the genesis of the blog as an instrument. The analysis of the topology of the network, confronted with the analysis of the content of the articles on the blogs, the comments of the readers and interviews with the authors. indeed makes it possible to emphasize the stages of the *instrumental genesis*.

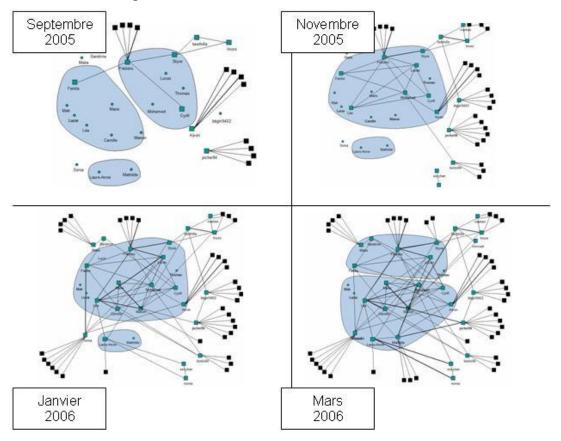
During an ethnographical inquiry in a French secondary school, we were able to follow for several months the co-evolution of a group of teenagers and the blogs which instrument the sociability of the members of this group. The collected data therefore allow to detail the stages of the structuring of this network and to show how it articulates in the evolution of the relations of face-to-face relationships observed in the school playground. During the immersion in the school, we could follow the adoption of blogs by a group of pupils in the last year of elementary school (aged 15-17). Among the teenagers in which we are interested here, six had a blog in September 2005, sixteen in June 2006.

To follow the appropriation of blogs by a group requires a whole of cross approaches. First of all, the talks and direct observations of situations of uses of the computers or situations of horizontal sociability of the teenagers in the playground make it possible to understand the forms of sociability and to define the groups of friends. The ethnographic statements of the teenagers in the playground, associated to ethnographic conversations (WOODS, 1986) make it possible to have an idea of the groups of teenagers being attended. The definition of the "groups " by the researcher implies a share of unavoidable subjectivity and arbitrary, the groups being themselves fluctuating with time. However, the statements of co presence in the playground make it possible to get a broad idea of the groups and its boundaries. Are regarded as members of the group the teenagers who are more frequently raised with the other members of the group than with others.

Then, the contents of the blogs of the group have to be analysed, in order to determine to what point the evolution of the face-to-face relations are reflected on the blogs.

Finally the traces of activities registered in the data-processing artefacts have to be collected and analyzed, in particular the form of the network consisted the blogs. Regular statements of the network have been carried out.

We had moreover to choose a chart adapted to visualize the joint evolution of the groups and networks of blogs. The following figure shows the correspondence between informal groups of friends and the network formed by their *blogrolls*, as studied between September 2005 and March 2006.



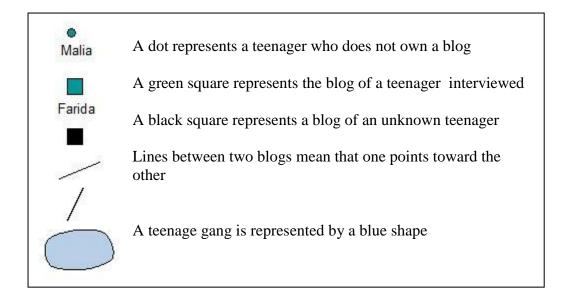


Figure 1 : Stages of the development of a network of blogs

Each four graph indicates the network of blogs, superimposed with the friendly networks of friends that can be observed in the playground. The round forms including several teenagers correspond with the groups of friends observed.

We will now detail the stages of the network construction, trying to link them with the stages of the adoption of a specific teenagers' sociability.

Creating the first blogs

At first, blogs are not communication tools, but rather an instrument to observe and incorporate the codes and behaviors of older teenagers. Children use blogs to get an idea of what older one do, say and think. They like to browse blogs from unknown older teenagers. It is therefore already a tool for the construction of one self, but not already to sustain sociability. Around the age of 15, many teenagers try and create there own blog.

In May and June 2005, several teenagers created blogs independently the ones of the others (Frederic, Mah, Farida, then Manon). One of the first is Frederic on May 9, 2005, which it describes itself in the presentation of his blog like "*devoted to me, my pals, my clobber...*". The activity, which one can measure in the number of posted articles and especially in the number of comments remained quite limited. Frederic's blog had much more comments than the others, though mainly from strangers met on a webchat, and encouraged to leave a comment on the blog.

In September 2005, when we met these teenagers, the future group of friends was not yet made up. A first group of girls existed since the previous year. Another group, composed of five boys, was made up around Frederic: Lucas, Thomas, Mohamed, Styve and Cyril:

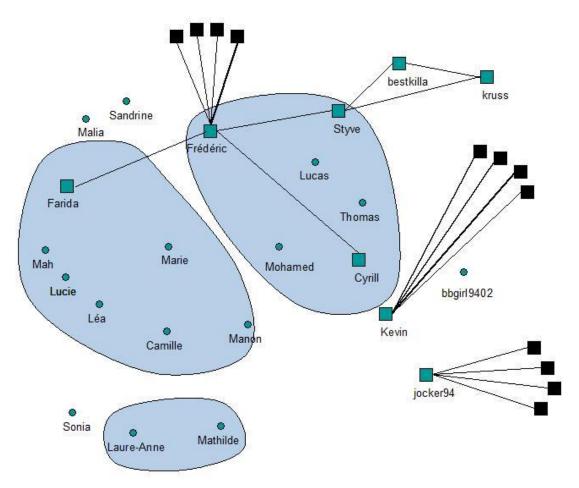


Figure 2: The network of blogs in September 2005

The graph represents the network in September 2005, superimposed with the two groups of friends who will amalgamate thereafter. Laure-Anne and Mathilde, bellow of the graph, will integrate the group even later. At this time, few have a blog. Why certain teenagers create a blog? Questioned, they express a need for expressivity and evaluation on behalf of their friends.

A need for expressivity...

The first blogs of the group are not primarily relational, intended to exchange with peers and to share sequences of everyday life. At the time when these forerunners create their blog, there does not exist yet a network nor a community of readers who could engage in an intense interpersonal communication. Thus, an expressivity wish prevails in the decision of creating a blog. For Frederic, one of the first to have created its blog, it is the need for expressivity which is proposed: "*Blogs make it possible to express things, to say what one thinks, things like that...*". For Lea, it is a question "*of showing to others my life* ", for Lucas, the most important is "*that my buddies see who is important in my eyes*". Blogs are thus in tension between the need for authenticity and the assertion of its own tastes on the one hand, and conformism rising from the need for affiliation to the group on the other hand (PASQUIER, 2005).

Frederic, accustomed to *chatrooms* and proud to be considered "bogoss " (good-looking young man) made of his blog an instrument for self-promotion, in which he invites correspondents known on *chatrooms* to leave flattering comments on photographs of himself. Farida uses its blog almost exclusively to post articles

devoted to her preferred singers. The nature and the number of the comments on these blogs reflect their various finalities. Farida's blog only has rare comments, while Frederic's one has many, almost from teenagers he does not know.

For teenagers, the need for expressivity shows particular patterns since they are precisely at a time of construction and assertion of their own tastes. However, this construction of individuals goes through the membership of a group of friends, so that there is a constant tension between the need for authenticity and conformism (PASQUIER, 2005). These two contradictory wills are exacerbated by the will to show themselves as autonomous. Their autonmy is indeed increased by the possession of a personnal computer in their bedroom, making it possible to communicate with friends while staying at home, thus partially escaping from parental control. Therefore, this is not only one's tastes and preferences that a blog can express, it is also one's increasing autonomy within the family.



Figure 3: an article on the singer Alicia Keys, on Farida's blog

A need for social evaluation

Along with the diffusion of the Internet address of the new blog among friends, a new function is added to that of simple puclicisation: a function of social evaluation. Lea explains that "*we put the individual photographs of our pals, those we appreciates or not.*" Indeed, at that age, the need for expressivity is inseparable from a need for evaluation on behalf of the friends. The gang is the main legitimating authority. Therefore, the expression of one's individuality does not take the form of a private diary: during this time of deep questioning of the childhood universe and its values, of progressive autonomisation, the glance of friends is more than ever necessary to teenagers. When creating a blog, talking publicly about friends or social and cultural activities, is indeed negotiating its place within the group. A blog is a privileged mean to build an image of oneself made up of the public provision of its musical or vestimentary preferences but also of a part of its relations with peers, which are constitutive of teenager's identity.

Blogs being explicitly created for a public made up of the friends, teenagers try to make them widely known. For that, some post the blog name and address in their instant messager, but it is mainly in face to face relations that teenagers incite their peers to consult it. In the group of friends studied here, the blogs of the ones and others were a very frequent topic for conversation in the first weeks of its generalization. This topic will become rare when a cluster of blogs strongly interconnected will be consisted and used almost daily the members of group.

Thus, posting group photographs or individual photographs of friends, is intended to show them that they are appreciated. The presence of its own photograph on a friend's blog is perceived as well as a demonstration of friendship: "*when you see your photograph, that always gives you pleasure* " (Lea). Lucas explains why he visits his friend's blogs to measure his popularity: "*it is interesting to see that your buddies appreciate you* ". For Iris, the comments make it possible to know the opinion of the friends: "*I find it funny, you discover what people think of you* ".



Figure 4: a picture of Thomas, on Frederic's blog

The constitution of a blogs network

The constitution of the network of blogs appears deeply rooted in the constitution of the teenage gang itself. Rather quickly, in the first weeks of September 2005, the two initial groups mentionned above amalgamated, and a mixed group appeared. At the beginning of the school year, Kevin, and Frederic showed interest for some of the girls of the group, through games and squabbles in the playground. These seduction games were prolonged on their blogs, Frederic making for example an article with the photograph of Manon:"*she thinks she's a star by here (...) u're so nice and not too bad looking* ", or Manon commenting on a photograph of Frederic: "*u're so hot* ".

Two months later, in November 2005, ten boys and girls ate together every day and spent most of their time in the schoolyard together. Whereas the cement of the friendships of the younger boys in the playground consists of the games such as football or of the discussions between girls, older teenager groups gather boys and girls and rely on more elective affinities. More importantly, these teenage gangs have activities outside of the schoolyard. The studied group used to go on saturday to Paris (half an hour by subburban train), to go to the movies, or had the first parties. As Lucie explains, "we see each other almost every week-end. We see each other every Sunday, we say we meet like fourteen on the Champs-Elysées, let say in front of Virgin, and every Sunday, we're there". These activities are described by teenagers on their blogs, as well as they talk about it in interviews. On their blogs, one can find pictures or comments from everyone. This teenage gang goes from a classic child sociability, where games and one "best friend" are central, to a teenage sociability, where the belonging to the gang is the most important (BIDART, 1997; PASQUIER, 2005).

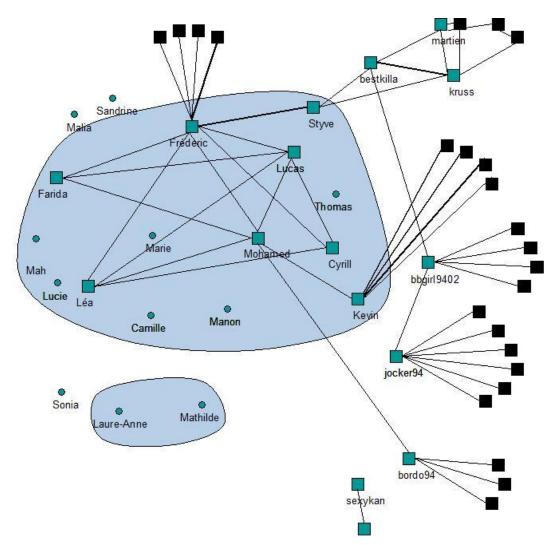


Figure 5: The network of blogs of the group in November 2005

At that time, Mohamed, Lucas and Lea created a blog. Laure-Anne and Mathilde, who will be part of the group in the following months are not yet integrated into the group.

What is interesting here is that blogs make it possible to instrument this new sociability. Blogs help teenagers to build up a shared universe, common to the group, as popular TV shows (PASQUIER, 1995) or radio broadcasts (GLÉVAREC, 2003) used to do. Indeed, the modification of the cultural and social activities system leads to a modification of the instruments system that mediate interpersonnal communication and the sharing of cultural references. A new activity system is set up, where a new community appears, constituted by the teenage gang. The point is that the place of blogs, considered as an instrument, in the activity system evolves. From a tool for expressivity and sharing of ones tastes, it becomes a tool to sustain phatic communication inside the group, to improve the homogenisation of the group by creating a shared universe, and to facilitate the identification of teenagers to the gang.

Indeed, the constitution of the group is reflected inside the blogs and through the shape of the blogs netwrk. Frederic added the blogs of Farida and Manon in his *blogroll*, thus becoming a central point of the blogs network in constitution. Then, like says it Lucas, "*this year, everyone started to create a blog* " and in a few days, Lea,

Thomas and Mohamed created their own blog, followed by Lucas. At the same time, Lucie and Sarah tried to create, but gave up. Being a teenager has to be exressed in visible ways, such as the way you dress, or by your cultural preferences. After a few weeks, belonging to the gang (and to the youth culture) is expressed as well by the possession of a blog, and most important, by the links between this blog and those of the friends. After a few weeks, the image of the new formed teenage gang can be reflected in the blogosphere.

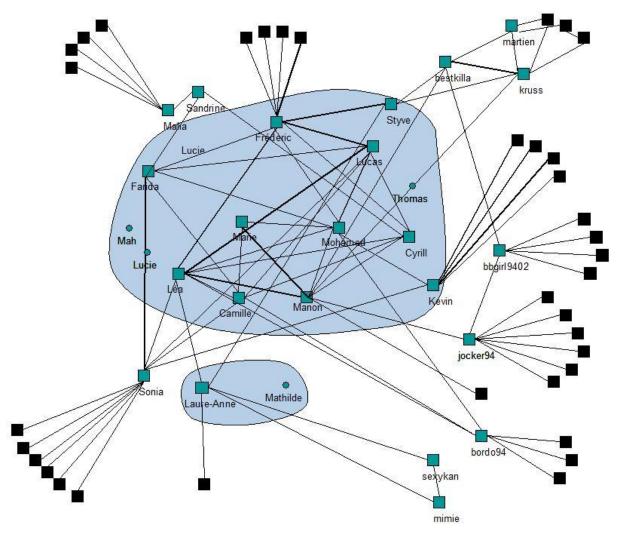


Figure 6: The network of blogs of the group in January 2006

In January, the group continues to gather everyday, as testified by the ethnographic statements in the playground, as well as conversations and articles on the blogs. Several teenagers created their own blog. Camille and Manon created theirs at the beginning of December. Thomas creates some during the holidays of Christmas, "*because I already had pals that had one, then to put photographs of my pals and son on.*". The graph therefore shows a very strong increase of the number of blogs, and a densification of the links.

It is the regular frequentation of blogs created independently by the members of the group which allows a progressive structuring of a network of blogs. By pointing the ones towards the others, these blogs form a cluster strongly inter-connected, reconstituting the community of the group of peers.

The blogs network as a collective communication tool

Whereas the first blogs created by the members of the group where mainly individual communication tools (from the author to his friends), when the network becomes interconnected enough, it is the whole network that becomes a collective communication tool.

Belonging to the teenage gang

First of all, the whole blogs related activity system evolves, being recentered on the closest friends. This can be seen though the content of the blogs and though interviews. The content of the blogs reflect the stages of the constitution of the gang. The group itself becomes an actor, and in addition to photographs of individuals, group picture become more and more numerous. For instance, Lea publishes photographs of her new friends:



Figure 7 : A photograph of Lea and her friends (Frederic, Lucas and Thomas) on her blog

In the next few days after this photograph appears on Manon's blog, it will be displayed on other blogs of the gang. Thus, not only are the blogs of the gang highly interconnected, but they also have a commum look, since many pictures and texts can be found on several blogs. Displaying too few pictures of the friends is seen as unfair: Lucas says that Frederic has "too many pics of himself on his blog. There is only him and his brother, not so many pals. There are lik five or six, the other ones it's only him (...), that's the problem". Indeed, appearing on friends blog is as important as having it's own blog, since it proves one's belonging to the gang.

The public of the blog evolves. Younger teenagers tend to talk to anyone: they say they need to have their brand new tastes and cultural habits widely known. With the creation of the blog network, teenagers tend to restrict the targeted public to their gang. The need for expressivity becomes inseparable from the social network and the glance of the gang. The organization of the network of blogs reflects the hierarchy of the gang: the teenagers more in sight in the group being found in the center of a network of blogs pointing towards them.

Whereas younger teenagers loved to get comments from unknown, older teenagers may be irritated by comments from unknown: "*that irritates, because they put comments, they use a pseudo X, and they put anything (...) on my skyblog I do not have any. If I had some, I would erase them* " (Lea). Some teenagers still seek comments from unknown, in order to increase their total number of comments, which

is used to measure one's popularity. However, for most teenagers, comments are from now on mainly from friends.

Blogs related activities also evolve. Wherease younger teenager spent a lot of time surfing on unknown blog, as soon as a network is constituted; teenagers say they mainly visit those of their closest friends.

Communicating through the blogs network

If the blogs created in November were mainly expressivist, the densification of the links between the blogs constitutes a new space for exchanges and dialogue which did not exist before. This new space modifies little by little the use of the blogs and interpersonal communication becomes predominant. This evolution can be observed firstly in the nature of the articles. The proportion of the articles which make it possible to express its musical tastes or its sporting preferences, as well as the articles which make it possible to be defined through the exhibition of its relational capital decreases. On the contrary, the proportion of "relational " articles, directly intended to cause comments increases.

In parallel, the number of comments increases, testifying to a more intense activity of communication on the blogs. Each teenager posts more comments than previously. On the one hand, the number of comments increases, of course, because there are more blogs in the group, but it also increases on older blogs, which are thus the support of a more sustained communication. More than 500 comments per month are posted on the blogs of the gang at the time of the first months of 2006. For example, Frederic's blog had known a great number of comments in the days following its creation (119 comments in the next month), primarily on behalf of unknown teenagers, met on chatrooms. This number had then fallen, until becoming practically null during the school holidays. But with the creation of new blogs in the group, all the blogs, including oldest, become the support of an interpersonal communication through comments.

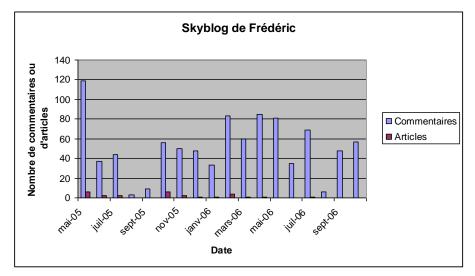


Figure 3: Evolution of the number of articles and comments on Frederic's blog

The comments are intended to reaffirm the existence of the social bond. One lets comments to a friend "*to tell him that I like him*" (Lucie, 3e). This use of comments, as well as the constant references to the other members of the gang, make that the

network of blogs gradually becomes a communication tool for the group. Comments make it possible to address in asynchronous mode to the entire gang. The network constitutes a social space that prolonges real life spaces as the playground, the park or the cinema. It helps consituting a micro-community (TREDAN, 2005) strongly anchored in real life sociability. This new communication tool is added without being totaly superimposed on the other communication used by teenagers (cell phones, instant messaging...).

Comments are often pain-killers, but make it possible to prolong peer relations at home, thus, constituting a piece of autonomy within the family universe and translating the emancipation desires of teenagers. The frequent renewal of the expression of friendship is encouraged by invitations to leave comments on almost every article, through a standardized message ("lachez vos com" in french). Friends are encouraged to cite their favourite football player or rap singer, to tell what they think of the author, or what they think love is. Answers to such questions seldom exceed a single line, and come almost exclusively from closest friends. The answer may have no meaning in itself, what is important to teenagers eyes is the friendship loads it carries. This use of comments on blogs plays a role in the daily maintenance of friendship bonds

Making teenager status visible

One of the main functions of the blogs is to attest that the author has grown up, and is a teenager. In that purpose, blogs may appear as a collective diary of classical teenager's activities. They give the opportunity to report the new form of cultural and social activities, such as parties or movies. This public expression on the blogs network of blogs has two main advantages.

On the one hand it makes it possible to hold informed the members of the gang of the various activities which took place, thus reinforcing the feeling of being a group. Those who missed on of the activities may live it by procuration. These activities may cause admiring comments or mockeries, but through their development, it is a mythology of the gang which is constituted little by little.

In addition, the public provision of the account of these practices also seems as a will to affirm in the digital universe its statute of "grown-up". It is not any more the possession of a blog which distinguishes from Youngers, it is also the type of activities which makes it possible for teenagers to mark the increase in their autonomy.

Conclusion

In the context of the fast diffusion of blogs among French teenagers, we studied the process of collective appropriation in a group teenagers through the evolution of a network of blogs. *Skyblogs* meet a double need expressed by the teenagers to affirm their own tastes, their personality, and all at the same time to show and validate the increase in their " symbolic size " and their affiliation with the group.

The blog is thus constituted both as a public space of assertion of its individuality (as opposed to the family) and its inscription in the group, and as a collective instrument of communication. The construction of this instrument goes through a structuring in clusters of blogs first considered only as instruments of individual expression. To evaluate its popularity and its inscription in the group, two principal means are employed: first to have a picture on a friend's blog, to have eulogistic comments added to this picture; second to get the higher possible number of comments on its own blog, this number being the stake of a competition between young boys.

These blogs are distinct from the ones of young adults or even of high-school pupils by their low dimension of self-production: they mainly aggregate preexinting content, images or text. This type of production of a certain self image, is to be considered very close to the production of its self image by the consumption brand clothes, or by the decoration of the bedroom with posters of singers or photographs of the friends¹.

Once the network of blogs made up and used like a collective tool, various functions cohabits. Blogs remain a kind of calling card destinated to friends allowing a definition of oneself, but also become a collective memory of the group, a tool for data exchange, photographs, information... They take place in the instrumental panoply of communication tools of teenagers, aside from instant messaging. Blogs are characterized their collective character, instant messaging being reserved for individual communication needs. Thus from individual instruments, blogs quickly become collective, by the way of a functional enrichment. It is indeed a form of *instrumental genesis* (RABARDEL, 1995), and its individual and collective dimensions are inextricably frays The blog could not find its signification as a communication of this appropriation is thus well the first condition first of its individual appropriation.

The public expression, on the blogs of the community, expresses new forms of sociability for these teenagers, such as the first dates, parties, or movie evenings, and presents a double advantage. On the one hand it allows to keep informed all the members of the community of the diverse activities which took place, therefore strengthening the feeling of belonging to a same community. On the other hand, the public display of these accounts reflects the will to mark in the digital universe that one is henceforth a grown up. Owning a blog is from that moment not sufficient to be distinguished from younger teenagers, the kind of night outs reported on the blogs allows teenagers to mark the increase of their autonomy. This leads to the idea that for teenagers Internet and blogs are not only communication tools, but most importantly they allow teenagers to mark their entrance into the adolescence.

Bibliography

BIDART C., L'amitié, un lien social, Paris, La Découverte, 1997.

CARDON D., DELAUNAY-TETEREL H., FLUCKIGER C. et PRIEUR C. Self expression as a relational technique. Four types of personal blog networks. Poster In: *ICWSM*. 2007.

CARDON D. et PRIEUR C., « Les réseaux de relations sur Internet, un objet de recherche pour l'informatique et les sciences sociales », *A paraître*, Vol., p. 2006. DE SINGLY F., *Les adonaissants*, Paris, Armand Colin, 2006.

¹"As shown by LIVINGSTONE, 1999, p. 124-125.

FLUCKIGER C., « La sociabilité juvénile instrumentée. L'appropriation des blogs dans un groupe de collégiens », *Réseaux*, Vol.138, p. 111-138, 2006.

GLÉVAREC H., « Le moment radiophonique des adolescents. Rites de passage et nouveaux agents de socialisation », *Réseaux*, Vol.21, n°119, p. 27-61, 2003.

HERRING S. C., KOOPER I., PAOLILLO J. C., SCHEIDT L. A., TYWORTH M., WELSCH P., WRIGHT E. et YU N. Conversations in the Blogosphere. An analysis "from the bottom up". In: *Proceedings of the 38th Hawaii International Conference on System Sciences (HICSS-38)*. Los Alamitos 2005.

LIN Y.-R., SUNDARAM H., CHI Y., TATEMURA J. et TSENG B. Discovery of Blog Communities based on Mutual Awareness. In: *3rd Annual workshop on the Blogging Ecosystem: aggregation, analysis and dynamics.* Edimburg 2006.

LIVINGSTONE S., « Les jeunes et les nouveaux médias. Sur les leçons à tirer de la télévision pour le PC », *Réseaux*, Vol.17, n°92-93, p. 103-132, 1999.

PASQUIER D., « "Chère Hélène". Les usages sociaux des séries collège », *Réseaux*, Vol., n°70, p. 9-39, 1995.

PASQUIER D., *Cultures lycéennes. La tyrannie de la majorité*, Paris, Autrement, 2005.

RABARDEL P., Les hommes et les technologies: approche cognitive des instruments contemporains, Paris, Armand Colin, 1995.

TREDAN O., « Les blogs dans la cité: entre quête de l'entre-soi et affirmation identitaire », *Cahiers de la recherche M@rsouin*, Vol., n°6, p. 2005.

WOODS P., *Ethnographie de l'école*, Paris, Armand Colin, 1986.