Social Networking and Affinity Spaces – The Virtual Atelier

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Dr. Gregory T. Papanikos
President
Athens Institute for Education and Research
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Abstract

This paper examines the impact digital culture, Web 2.0 and Online Networking, an area we might collectively define as e-culture, is having on the practice, modes of collaboration, distribution and consumption within contemporary printmaking. The authors will examine, from the perspective of critically engaged practice, developments in social networking and affinity spaces that have seen the creation and promotion of new affinity groupings or engaged networks, which have extended our traditional and existing collaborative atelier models, towards promoting significantly new collaborative and participative modalities. Drawing on primary research, which forms part of a PhD project, involving a survey of ‘49’ international practitioners together with the comparative analysis of current printmakers networks, such as ‘Inkteraction’, an argument is proposed for an alternative ‘Virtual Atelier’ model, which extends the traditional collaborative model originally conceived in connection with the working practices of S.W. Hayter’s Atelier 17. These developments and practitioners’ greater engagement with social networking and digital networks, are resulting in artistic collaborations which might be seen to extend over both time and distance in wholly new collaborative ways. Raising philosophical questions around: the impact e-culture, de-materialised practice and emerging new models of print-based artistic practice are having on this area. The paper concludes that this process is and has been evolutionary rather than revolutionary in the context of fine art print practice.

Contact Information of Corresponding author:
Introduction

The findings outlined in this paper draw upon research\(^1\), which has sought to examine how developments in digital culture, Web 2.0 and Online Networking are impacting on the physical and temporal parameters of printmaking practice. Leading to a ‘Post –Physical’ e-culture driven paradigm shift in this area. This paper outlines research, which explores the application of these digital processes, and reflects on current developments in social media and affinity spaces, in seeking to map these cultural shifts in digital participation against traditional collaborative models. This work draws upon the author[s] experience as practising contemporary fine art printmaker[s] and research undertaken in digital space[s] utilising Social Networks as a research tool.

Contemporary fine art printmaking, within this research, is identified as individuals/groups/networks engaged in a process of symbolic change, innovation or novelty within a recognised cultural domain. It might be clarified, as the process of creating and producing unique but multiple artworks rather than the commercial reproduction of a pre-existing and singular work\(^2\). The practice of printmaking necessitates a technical environment (whether physical plant: mechanical printing presses or increasingly electromechanical processes – digital printing), requiring significant investment beyond the scope of the individual artist and consequently printmaking practices are frequently undertaken in collective workshop or ‘Atelier’ environments.

Since the mid 20th century printmaking practice has seen the establishment of a large number of communal workshops which unlike commercial print studios are founded on notions expressed by SW Hayter in the establishment of the influential ‘Atelier 17’ which unlike traditional workshops, was predicated on open and equal collaborative dialogue between printer and artist. Thus the Atelier may be viewed as ‘artists working together, pooling their ideas, communicating to one another their discoveries and achievements.’ (Read 1949) or operating on the notion of creative ‘commons’\(^3\).

Contemporary printmaking ateliers such as Edinburgh Printmakers (Figure 1) build on this model. Although independent and unique in their individual outlook, they offer a similar range of functions, which in addition to physical print production facilities provide; sharing of artistic knowledge, technical expertise, professional development, an educational provision, together with exhibition and importantly social, collegiate interaction within a context of creative commons.

Analysis of Printmaking Ateliers

Although there is no single model across printmaking ateliers there are common features. The ateliers considered here are composed of multiple and collective membership, as opposed to the private editioning studio/workshops. Internationally there are many Ateliers and Table 1 provides a representative sample.

Within these ateliers the focus is upon offering both space and production facilities to the artist printmaker, rather than the production of editioned works by master

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\(^1\) As part of a PhD being undertaken at Grays School of Art / The Institute for Innovation, Design & Sustainability Research at The Robert Gordon University Aberdeen Scotland

\(^2\) [www.edinburgh-printmakers.co.uk > prints > what is an original print?](http://www.edinburgh-printmakers.co.uk > prints > what is an original print?)

\(^3\) Creative Commons the voluntarily sharing of work by authors / creators - [http://creativecommons.org](http://creativecommons.org)
printers on behalf of an artist or gallery (although this may be an adjunct in some cases). Within the Ateliers there are, in addition to print production facilities, education programmes, exhibition opportunities, information/knowledge exchange, together with shared social interchange & networking. Commonly membership is open, based upon evidence of technical competence, previously evidenced or gained through formal art education or training courses run by the atelier itself.

Methodology

This research sought to examine the underlying mechanisms and nature of the impact digital social networking is having in developing greater levels of participation. Significantly these same networks were also the medium of the study itself, becoming a research platform for the study of practitioners ‘affinity spaces’ (Davies, J, 2006)

The printmaking community is diverse in experience, is international in scope and yet individualistic in nature. Thus the ontological nature of the research considers that ‘Realities exist in the form of multiple mental constructions, socially and experientially based, local and specific, dependent for their form and content on the persons who hold them’ (Guba 1990). It is within this community that the authors are embedded, consequently the qualitative research was undertaken by means of active participant observation and adopted Bryman’s definition of ethnography wherein the researcher is:

- Is immersed in a social setting for an extended period of time;
- Makes regular observations of the behaviour of members of that setting;
- Listens to and engages in conversations;
- Interviews informants on issues that are not directly amenable to observation or that the ethnographer is unclear about (or indeed for other possible reasons);
- Collects documents about the group;
- Develops an understanding of the culture of the group and people's behaviour within the context of that culture;
- And writes up a detailed account of that setting.

Thus, the nature of this research necessitated participant observation and is also encapsulated the notion of participant observation as a written product of ethnographic research ’(Bryman 2008) directly influencing the research design and subsequent practice led elements of the PhD research project.

Social networks

The emergence and adoption of Social Networking over the last 12 years (Figure 2) reflects a maturing ‘digital culture’ (Deuze 2006) and greater connectiveness between producers and consumers of cultural behaviours (Bolter and Grusin 2000) that provide clear indicators of digital adoption within communities towards new e-cultural nodes of engagement.

The on-going developments and adoption of social networking as a cultural mechanism has become highly significant within many sectors of society as illustrated by the total estimated visitors to the top 15 social network sites recorded during
January 2012 (Table 2). Within this context people from widely dispersed locations have been able to create new and interactive networks through interactive media, linking individuals in networks which ‘transcend time and space’ through flexible diffusion structures (Bandura 2001). The individual is afforded a voice within the social grouping, a phenomena which, Van House suggests offers greater levels of self expression reflecting the individual’s unique point of view, creativity and aesthetic sense (Van House 2007). Davies identifies that such networks form an ‘affinity space’ (Davies 2006) as defined by (Gee 2004) comprising:

- Common endeavour (interests, goals or practices).
- The space has content.
- The content is organised.
- Individuals can choose to interact with content and/or each other.
- Individuals share the same space, even if fulfilling different roles.
- There are many ways (portals) of entering the space.
- New content can be generated.
- Many types of knowledge (individual, distributed, dispersed and tacit) are valued.
- Group endeavour is valued and encouraged.
- Interactivity is required to sustain the affinity space.
- Novices and the experienced occupy the same domain; there is no segregation.
- There are many ways of participating and these can change temporally.
- Leadership is ‘porous’.
- There are many ways of gaining status.
- The organisation of the space can change through interaction.

Thus developments in social networking and affinity spaces have afforded and promoted new forms of collaboration and participation across both mixed and specialist social groups. Collaborative spaces in which expanded conceptions of peer-to-peer learning over time and distance through mediated learning and sharing are engendered. As Davies identifies ‘Affinity Spaces allow us to share new ideas and new ways of seeing and to bring cultural understandings together with others, where they can be re-examined, used and transformed in the image-making practices of others.’ Consequently this research undertook to examine through ‘purposive sampling’ (Bryman 2008) the extent adoption of such mechanisms amongst the printmaking community is having on established collaborative models. (At the time of writing an indication of the range of printmaking related online groups and social media sites comprised 21 groups with over 24,269 members (Table 3). Clearly the potential for multiple memberships exists, however in general this is a substantial indicator of the increasing importance and propensity of this sector to adopt and engage with these developments. Examination of these spaces (through membership), identified that the conditions for the aforementioned ‘affinity spaces’ exist; and the evolution of new models of collaboration within the ‘digital space’ of the printmakers networks identified in Table 3.

‘Digital space’, is defined by Kilian as ‘...the set of all information in digital form’ which people can ‘access through digital interfaces’ (Kilian 2000). Digital space also contains ‘both information and a representation of the people accessing it’ (Ibid), and furthermore also contains representation of the people populating it with both their
‘data shadow’ (Westin 1967) formed by the integration and comparison of the computer files about them (Fitzpatrick 2000) and their ‘image shadows’ formed of shared images contributed to image galleries within the selected social network. Consequently artistic practitioners create an aesthetic and contextual trail through digital space capable of persistence even beyond their own lifespans as may be illustrated by a simple web search for Ben F. Laposky (1914–2000).

Within this new context the printmaker[s] / artist[s] in this study engaged in digital space by either:

- Primary intention: through the hand of the artist in making and publishing their work by digital means (akin to conventional notions of printmaking in this regard)
- or Secondary intention: through scanning and online publishing of a once physical or material print in order to distribute digitally and subsequent participation in digitally networked communities and image sharing libraries (Akin to a ‘mediated form’ (Bolter and Grusin 2000) in this sense).

Thus the print is created in a digital state, or undergoes a process of ‘de–materialisation’ (Bolter and Grusin 2000), once or twice removed from conventional notions of ‘print’ and becomes temporal in its mediated form. As such the product of artistic intention and visual practice might be seen to have more in common to ‘code’.

Digital code ‘is the language of our time’ (Sonvilla-Weiss 2010) illustrated in the artistic domain by the significant series of identifiable key ‘survey’ exhibitions of art-form made through the coded digital medium beginning with ‘Experimentelle Ästhetik’ - Museum of Applied Arts Vienna (1959) through to Decode: Digital Design Sensations - The Victoria & Albert Museum London (2009/10) see Table 4.

Code now provides new domains of ‘networkedness’ through adoption of ‘the cloud’ producing ‘a parallel digital universe that is stored in and dispersed through a gigantic network of databases around the globe.’ (Sonvilla-Weiss 2010). A ‘parallel digital universe’ that is ‘omnipresent’ which: ‘comes from the fact that a networked digital set of information is theoretical equally accessible (and viewable) in all its parts at all times. This means that ‘all information is present everywhere in the space at all times’ (Kilian 2000). Thus when undertaking printmaking in digital space the artist is presented with new opportunities for the meeting of artistic intention and acquired knowledge. Opportunities which reside in an increasingly fluid, ambient and collective digital space, which may be akin to those of an ‘atelier’. Arguably these Artists working with the net are essentially concerned with the creation of a new type of aesthetic that involves not only a visual representation, ‘but invisible aspects of organisation, retrieval, and navigation as well’ (Vesna 1999) and this is increasingly more significant given the growth of artist’s image and data shadows.

Analysis of print artist activity within social networks

This research analysed current modes of networked activities and digital participation by print artists using Flickr, Facebook and Ning (Inkteraction). Flickr (Figure 3) founded in 2004 originally incorporated live chat and live photo-exchange, has evolved into a user driven online community founded in image hosting and sharing. As identified by Davies (2006) Flickr constitutes an Affinity Space inherent
with the features of common endeavour, organisation, content generation and interaction.

Facebook (Figure 4) conversely was founded in conceptions of social interaction through ‘friendship’ and retains this primary focus. Although elements of affinity are prominent, common endeavour is not a primary function. However as Facebook has evolved, facilitation of ‘common endeavour’ and other elements of ‘affinity spaces’ have developed through ‘groups’ and chat features.

Ning (Figure 5) from its outset in 2005 formed a platform for the creation of custom social networks. These networks were created by and for affinity groups and thus result in greater focus upon common endeavour within their structure and content. In its conception Ning originally provided a model closer to open source networking and information sharing until its commercialisation in 2010.

In overview the proprietary social networking platforms in popular use, have increasingly developed common features such as galleries, chat rooms, sub-groups and open and person-to-person communication. Although based upon original conceptions of ‘open source’ peer to peer interaction such as wikis, bulletin boards, web logs and file sharing the propriety networks are now founded on defined structures incorporating content management, monetization, data farming and advertising streams which are now at variance to any ‘open source’ origins. Holistic analysis of the three platforms selected for this research reveals that each reflects the conditions identified by Gee for an ‘affinity space’ in differing ways. Flickr groups may be characterised as online exhibition and image sharing forums, whilst Facebook focuses on person-to-person mutuality whereas the Ning groups concentrate upon affinity and common endeavour. Whilst the printmaker’s social network Inkteration, hosted on Ning, reveals an interrelated set of features and activities through both its menu system and home page structure, with a ‘featured artist’ and latest activity panels.

Historically, printmakers enjoy the sense of community that an atelier or workshop offers through the simple but important notion of collegiate space: sharing images, ideas and techniques. Central to this artistic practice is the multiple or editioned print, which increases their creative reach to individuals outside their immediate community by the key means of the practice of exhibition and exchanging prints etc. This ‘core’ driver the multiple or edition, of printmaking has a shared history with commercial graphics but is significantly different, where the need for printmakers to share equipment and expertise has encouraged the propagation of community print projects that have often redefined the role of printmaking as a vehicle for social innovation (Abrioux and Bann 1992).

These collaborations were traditionally fostered through a variety of sources. Print artist society newsletters, journals such as ‘Imprint’ (from the Print Council of Australia 1966 on), publications such as Printmaking today (Farrand Press London 1990s on). International print exhibitions, festivals and conferences in particular ‘Biennales and Triennales’ [research by Ford reveals at least 25 international events (Ford 2005)] and of course word of mouth within the physical atelier.

Although traditional conceptions of collaboration focus upon the relationship between artist, master printer and publisher the conception of collaboration as the sharing of images ideas and techniques reflects a new notion of collaborative practice. In which, as Leggett identifies, the art activity moves away from geographically installed artefacts towards definable and mobile systems and processes although they are ‘harder to classify within the taxonomies of art and social behaviour’(Leggett 2006). Within this expanded, mediated context collaboration between the artist and
audience can become a two way process or dialogue as in the expanded ‘digital author – reader relationships’ described by (Skains 2010)

Examination of the Inktetraction network (Figure 6) reveals significant collaborative activities being generated with 99 calls for print exchange, 518 calls for exhibition opportunities / announcements and 82 calls for project proposals, during 2009 – 2012. Direct research though interviews and surveys conducted 2006-2012 revealed examples of project collaborations with artists in Australia, Brazil, and Cuba after a conference in Cuba as well as faculty and advanced students at Woodbury College in Los Angeles and at UNC Charlotte cited by Heather Freeman (USA) (Freeman 2011). Freeman also identified the process of emailing or ftp-ing Photoshop files back and forth to work on the same image until agreement was reached upon completion - akin to collaborating in a conventional sense within a physical atelier but here articulated over an online network through digital mediation. Another respondent identified Information exchange which led to collaborations (Murphy 2011), and sourcing of other artists to collaborate with through viewing their portfolios online (McMaster 2011).

A significant area of collaborative practice within the virtual ateliers lies in print exchange and exhibition, many of which are promoted through networks and groups within Flickr, Facebook and Ning (Inktetraction Print Universe). Recent examples are the annual community fund raising portfolio exhibition ‘Navigating the Currents: 100 Inktetraction Reactions’, funding the costs associated with hosting (Figure 7). ‘Lagniappe 7: For Good Measure’ physical print portfolio exchange call hosted by Louisiana state university and ‘Born Digital – New Materialities’ a digital print portfolio exchange (Figure 8) conducted as part of this research. Ray Henshaw (Northern Ireland) when surveyed identified ‘Opportunities’ as being the most significant element of the networks, being ‘a welcome aid for exchanging opinion, getting help on developments, of ethical issues. Seeing artist’s works in divergent countries.’(Henshaw 2011)

Within these Virtual atelier significant use is made of information exchange and collaboration on technical issues inherent in a range of printmaking processes. Analysis of the Inktetraction forum (Figure 9) reveals 844 threads or discussions during the period 2008 -2012. Kitchen lithography, etching, gum arabic printmaking, what is the best adhesive for chine colle? What’s your favourite intaglio printmaking paper? and how to print without a press were the threads with the most replies. Normal enough conversations within the traditional atelier, however in the digital atelier new conditions emerge. Where the conversation shifts from ephemeral, person to person a growing documented ‘thread’, whilst the exchange of knowledge is available to a broader audience than the direct participants and the audience may contextualise each participant against their own ‘portfolio’ of practice and personal profile.

Deeper examination of the network ‘Inktetraction’ reveals a collaborative work of over 6,000 participating artists, suggesting that the communal effort of the network’s members is a significant example of the new forms of collaboration facilitated through the digital medium. A condition described by Cornell wherein ‘Fostered by the Internet and the portability of prints, an international synergy among printmakers produces far-flung exchange projects and collaborative portfolios, inviting multiple cultural voices into the discipline, sustaining the ability of the print to communicate outside established channels, and reinvigorating the existing tradition of the socio-political print” (Cornell 1997).
Discussion

In considering one of the core activities of the digital atelier ‘image sharing’, a process of publishing self-authored works to the practising community and beyond we should consider the motivations of the author. Kelomees argues that the same motivations are at play for the contemporary artist as in traditional societies where social interaction is not ‘...totally altruistic. Offering a gift in traditional societies is an act that takes place in the context of mutual expectations, hoping to gain status, rights or more gifts in return (Acevedo 2003), this is no less pertinent in a digital society.

Kelomees suggests that since the mid 20thC, art has become increasingly participatory allowing the spectator to participate and establish co-authorship with the viewer. In light of developments in social networking within the digital atelier, this relationship has increased exponentially to become real-time and dynamic, almost conversational, developing clear modes and opportunities of dialogue and discursive feedback and dialogue amongst participants. This research suggests that the networking sites examined might be considered as new or significantly altered modes/forms of digital atelier building on and integrating the ‘social’ networking opportunities of first-person and ‘net-worked’ interactions.

Although Van House has suggested general image sharing within social networking may be transitory and ephemeral (Van House 2007). This research argues that within ‘expert groupings’ (which this research terms Virtual Atelier) the meta-data or history of the image-activity assumes greater significance and hence degrees of separation from general social networking, as a consequence of the extended context and considered processes of making and refining the submitted material. Furthermore, as Nicol suggests printmakers are a ‘fraternity’ of artists who traditionally ‘enjoy the sense of community that a printshop (atelier) creates by sharing their images, ideas and techniques with all’ (Abrioux and Bann 1992). Thus printmakers are uniquely placed within this scenario given their historical skills in collaborative practice (developed through traditional atelier, knowledge exchange and international exhibition) and have naturally adopted the ‘digital’ as both a means of ‘making’ and a medium for networked communication/exposition, emphasising their unique position given their historical adoption of new technologies.

Consideration of the technologies inherent within the conception of the digital atelier may lead some to argue that as such we are encouraging the loss of 'hand' in the practice of art. However this view may be countered by Bryant and Pollock’s argument that ‘we are easily and often misled by technological innovation to lose sight of what Marx argued, that machines must be recognised as themselves as stored up human labour’ (Acevedo 2003). The print artist has a long history of the utilisation of the machine within both the modes of reproduction and also the collaborative, social participatory practice of image sharing (multiple print to networked-print), a process which the community, this paper has sought to appraise, is now actively questioning and extending to include digital networking and communication.

To conclude this research has examined a set of social networks used by practising print artists. Networks, which may now be viewed collectively as a ‘Virtual Atelier’, in which, like the working practices established by S.W. Hayter’s ‘Atelier 17’ artists work in a connected way sharing their ideas, discoveries and achievements, but now through internet based digital networks, at a variety of levels of engagement from direct person to person/proximity based to expanded ‘digital neighbourhoods’ of connectedness. Naturally adopting artistic collaboration over time and distance
engendered through de-materialised or networked collaborative practices. This further emphasises the unique position of the print-artist within the oeuvre of art practice and the emergence of new models of de-materialised practice.

Conceptually the structure and relationship of collaboration within these virtual ateliers should not be viewed as a hierarchical structure but rather as digital neighbourhoods, which may be considered as gathering through affinity for an unspecified time with porous leadership. In this context we should therefore consider that the digital atelier although founded initially in disparate physical human activity achieves a sum greater than its parts and is in essence a new form of collaborative work in itself and as such is of meaningful proportion in reflecting the emergence of new forms of participation, dialogue and interaction as contextualised against the shift from 19th-century print culture via 20th-century electronic culture to 21st-century digital culture (Deuze 2006). And thus we should consider the emergence and evolution of digital ateliers as part of a natural evolution of the creative practice of the print artist rather than any sensationalist conception of a digital revolution.

Figures
Figure 1 Edinburgh Printmakers Workshop
Figure 2: A simplified timeline of select social networking sites (2000-2007) after Boyd & Ellison 2007.

Figure 3: Flickr Printmaking Group

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Figure 4 Facebook Group - Friends of the Baren

Figure 5 Ning – Inkteraction printmakers network
Figure 6: Inkteraction – a digital atelier
Figure 7: comunal fund raising exhibition

Navigating the Currents: 100 Interreaction Reactions

Inkeraction is the web’s largest community dedicated specifically to printmakers. With members spread out across the globe, the network acts as a central meeting place. It is a place to settle down and share tales, to meet with old friends and to make new ones; to ask questions and to share knowledge. In essence, Inkeraction is a port in the storm that is the internet. In a time when mastery of the internet is an essential skill for any artist, the administrators of Inkeraction have asked 100 community members to volunteer their interpretation of how

Figure 8: ‘Born Digital - New Materialities’ digital portfolio exchange

Printmaking 2-0

Examining the physical and temporal parameters of post-studio print making practice through the exploration and application of digital processess in making and cultural shifts in digital participation.

“Born Digital - New Materialities”

“Born Digital - New Materialities” - an exciting survey mini-print exchange / exhibition of contemporary digital printmaking.

Curator - Paul Thompson (Grays School of Art - Robert Gordon University)

About The Research and Paul Thompson >>

-Enter the portfolio microsite>>

When an object is created in digital form, we describe it as being ‘born digital’, whilst, as artists, we are increasingly utilizing technologies which demand new concepts, forms and aesthetics - ‘new materiality’.

*From born.taxonomy, 2011*
Table 1: Non-exhaustive list of international Printmaking Atelier

1. Open Studio Toronto, Ontario, Canada
2. Australian Print Workshop Fitzroy, Victoria, Australia
3. Amstads Grafisch Atelier Amsterdam Netherlands
4. The Icelandic Printmakers Association, Reykjavik, Iceland
5. Honolulu Printmakers, Honolulu, Hawaii USA
6. Lower East Side Printshop, New York, USA
7. Seacourt Print Workshop Bangor, County Down, Northern Ireland
8. Cork Printmakers, Cork, Ireland
9. Edinburgh Printmakers, Edinburgh, Scotland
10. Peacock Visual Arts, Aberdeen Scotland
11. London Print Studio, London UK
### Table 2: Top 15 Social Networking sites by number of visitors

<table>
<thead>
<tr>
<th>Social Networking Site</th>
<th>Estimated Unique Monthly Visitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
<td>750,000,000</td>
</tr>
<tr>
<td>Twitter</td>
<td>250,000,000</td>
</tr>
<tr>
<td>LinkedIn</td>
<td>110,000,000</td>
</tr>
<tr>
<td>MySpace</td>
<td>70,500,000</td>
</tr>
<tr>
<td>Google Plus</td>
<td>65,000,000</td>
</tr>
<tr>
<td>DeviantART</td>
<td>25,500,000</td>
</tr>
<tr>
<td>Lycos</td>
<td>20,500,000</td>
</tr>
<tr>
<td>Tagged</td>
<td>19,500,000</td>
</tr>
<tr>
<td>Orkut</td>
<td>17,500,000</td>
</tr>
<tr>
<td>City mom</td>
<td>12,500,000</td>
</tr>
<tr>
<td>Ning</td>
<td>12,000,000</td>
</tr>
<tr>
<td>Meetup</td>
<td>7,500,000</td>
</tr>
<tr>
<td>Mylife</td>
<td>5,400,000</td>
</tr>
<tr>
<td>Badoo</td>
<td>3,000,000</td>
</tr>
<tr>
<td>Classmates</td>
<td>2,500,000</td>
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</table>

**Total**: 1,371,400,000

*Source - eBizMBA.com, eBusiness knowledgebase 25/01/2012*
<table>
<thead>
<tr>
<th>Name of Group</th>
<th>url</th>
<th>Membership 2010</th>
<th>Membership 2012</th>
<th>Network %</th>
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<td>4,202</td>
<td>6,036</td>
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<td>982</td>
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<td>Artist Books 3.0</td>
<td><a href="http://artistbooks.ning.com/">http://artistbooks.ning.com/</a></td>
<td>1330</td>
<td>2,383</td>
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<td>1,084</td>
<td>1,559</td>
<td>+43%</td>
</tr>
<tr>
<td>I LOVE LITHO - - - and most other forms of printmaking</td>
<td><a href="http://www.facebook.com/group.php?gid=6041889943">Facebook group</a></td>
<td>446</td>
<td>4**</td>
<td>n/a</td>
</tr>
<tr>
<td>Book Art, Artists Books and Book Artists</td>
<td><a href="http://www.facebook.com/group.php?gid=2458264065">Facebook group</a></td>
<td>1,859</td>
<td>8**</td>
<td>n/a</td>
</tr>
<tr>
<td>Printmakers Rock!..Oh yes they do!</td>
<td><a href="http://www.facebook.com/group.php?gid=2297074577">Facebook group</a></td>
<td>339</td>
<td>1**</td>
<td>n/a</td>
</tr>
<tr>
<td>I Love Printmaking</td>
<td><a href="http://www.facebook.com/group.php?gid=2259500527">Facebook group</a></td>
<td>1,781</td>
<td>8**</td>
<td>n/a</td>
</tr>
<tr>
<td>I'm not OC, I'm a printmaker.</td>
<td><a href="http://www.facebook.com/group.php?gid=2212695085">Facebook group</a></td>
<td>198</td>
<td>1**</td>
<td>n/a</td>
</tr>
<tr>
<td>Printmaking presses and equipment</td>
<td><a href="http://www.facebook.com/group.php?gid=121864389055">Facebook group</a></td>
<td>437</td>
<td>4**</td>
<td>n/a</td>
</tr>
</tbody>
</table>
Prior to April 2010 the NING network for creating custom social networks provided a free service which due to restructuring of their business model began to charge for hosting these networks after this period. Consequently a number of networks have now been deleted, however in the case of Inkteraction, Print Universe and Artists Books 3.0 significant increases in membership (43%, 340% and 79% respectively) have been observed in the ensuing period.

**Facebook**

Facebook initiated changes to ‘groups’ during mid 2011, which archived existing groups and migrated them to the new group format. During this process unless group administrators manually migrated their membership then the group network and its membership would be lost consequently the apparent size of groups appeared to decline significantly in some cases post 2011. Although participant activity continues within these groups it is at a reduced level correspondingly activity on the Facebook page ‘Printmaking’ appears to have increased with currently 12,910 likes (03/02/12).

Table 4: Key ‘Digital’ Exhibitions 1959 - 2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Exhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959</td>
<td>‘Experimentelle Ästhetik’, Museum of Applied Arts Vienna</td>
</tr>
<tr>
<td>1968</td>
<td>‘Cybernetic Serendipity’, ICA London</td>
</tr>
<tr>
<td>1988</td>
<td>‘Electronic Print’ Arnolfini Gallery Bristol</td>
</tr>
<tr>
<td>2001</td>
<td>‘010101 Art in Technological Times’, SFMOMA</td>
</tr>
<tr>
<td>2009/10</td>
<td>‘Decode: Digital Design Sensations’ The V&amp;A London</td>
</tr>
</tbody>
</table>
Bibliography

Murphy, J. (2011). Artist Survey. USA.