

Research and Practice in IA

by Andrea Resmini and Keith Instone

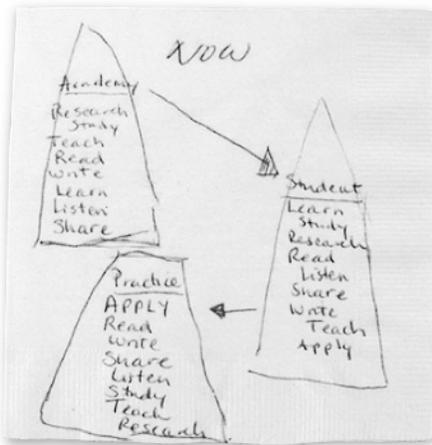
Information Architecture

It takes a village of practitioners to raise a discipline.

— Nathaniel Davis. “Practice of Information Architecture” [1]

What is the current relationship of research and practice in information architecture? That was the question posed in a “back of a napkin” collective-thinking exercise introduced by Keith Instone and Andrea Resmini in “Bridging IA Research and Practice,” a session they co-hosted at the 11th ASIS&T IA Summit in Phoenix, Arizona [2]. For additional ideas from participants, please see the list and description of other “napkin sketches” at the end of the article.

During the session, Melissa Weaver crafted the following sketch.



Weaver’s drawing represents the “now” in IA: the academy teaches students, and they, in turn, become practitioners who apply what they have learned. It is a one-way relationship.

The session was meant as an opportunity to re-start a dialogue between practitioners and researchers

Sketch C, Melissa Weaver. Front of the napkin: IA practice and research as it is now. Picture available at www.flickr.com/photos/resmini/4511078061/in/set-72157623664715269/.

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in the field of IA, with the primary goal being to offer some common ground to discuss the different approaches to core IA issues, facilitate understanding of the different views and interests at play, highlight both the strengths and weaknesses of the instances academia and business present, and identify the added value this diversity brings to the conversation.

Secondarily, the session served as a test bed to verify the feasibility to extend and expand the conversation to the 12th IA Summit in 2011. The following are among the questions raised:

Should a pre-conference consortium be part of a tentative answer to bridge the gap?

Should IA-related publications, such as the *Journal of Information Architecture*, be somewhat more involved in this specific conversation? How?

“Beyond expectations” is how the organizers summarized the workshop. More than 30 participants from both camps (research and practice) exchanged ideas. To uncover these ideas, the group facilitators used rapid sketching – attendees drew sketches on real paper napkins, which were collected, explained and discussed. A number of very interesting points were raised in these brief, open exchanges. The following major themes, statements and questions [3] emerged:

1. Research and practice in IA are fractured, with very weak connections in between (and this gap is not unique: many disciplines face this challenge).
2. There is a need for an IA research agenda (or if there is one, it needs to be common knowledge). Or, the opposite: there is no such thing as IA research by itself: there is HCI, IS or LIS research that IAs care about.
3. A huge percentage of time, people and resources in the field are devoted to IA practice only. Few resources are committed to scientific IA research.

RESMINI and INSTONE, continued

4. Many people confuse “project research” that is done in a specific context (and is extremely useful for that project, but hard to generalize to anything else) with “scientific research” which proposes a hypothesis and tests it with data.
5. Resources like Google scholar provide an easy means to find existing research, but making sense of the research and applying it is very difficult. There is clearly an opportunity for a “Carl Sagan like” figure to bridge the gap from research “awareness” to “consumability” for practitioners (with its related question whether there is a business model waiting to happen here).
6. IA research needs to be part of an aggregation that looks across disciplines and present boundaries to really be effective for practitioners.
7. Transferring knowledge is possible. BJ Fogg of Stanford Persuasive Technology Lab and of “Persuasive Technology” book fame [4] was introduced as an example of a researcher who spent a lot of time explaining his research to a company.

Detecting Patterns

Most of these points might seem to stem from plain common sense, and certainly some of them have been long discussed in the community at large. Nonetheless, the picture they paint is definitely interesting. A few common patterns can be detected:

- Current state of research and practice
- Challenges and opportunities
- Roles and responsibilities
- Necessary next steps.

All seven sections point to one single undercurrent that touches on all points: communication. Research and practice have to bridge their distance and move from Melissa Weaver’s “now” to the another image she illustrated during the workshop: her “ideal” environment – one where communication is bi-directional.

Sketch D, Melissa Weaver. Back of the napkin: IA Research and Practice how it should be. Picture available at www.flickr.com/photos/resmini/4511078527/in/set-72157623664715269/.

Current state of research and practice.

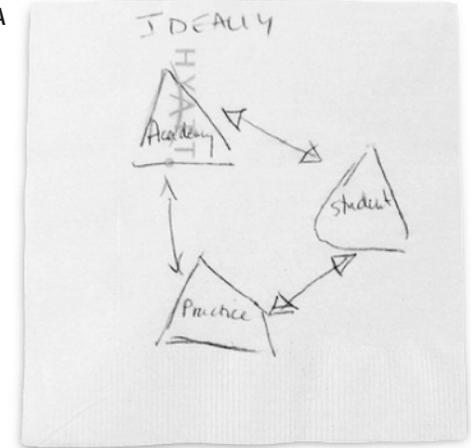
Very often academic research has roots in very different needs than those experienced by practitioners and provides results that are of little or no interest as is. Some universities make the connections between project and scientific research, and some

universities have strong ties to industry (Scandinavian universities, for example). But there is often a breakdown. Currently, research results trickle out with infinite slowness, go unnoticed or become dismissed too easily.

Certainly, this state of affairs reflects the general issues of research-practice relationships in every field. Academic thought moves forward, sometimes in ways disconnected from practice. Conversations about practice often go in circles: The same questions, issues and solutions tend to resurface every other year at conferences. (The IA Summit serves as a good example here.) But the challenge facing IA researchers and practitioners extends to a recent diverging trend in the way IA has been explained and understood.

Let’s look at this trend: while research has expanded somewhat towards a process-informed view, the practice of information architecture has been under pressure to be narrowly defined and artificially restricted to a few best practices related to categorization and labeling. This development is not necessarily counterintuitive, if all the field should expand to address the design challenge brought forth by ambient intelligence, mobile and ubiquitous computing and the new information spaces they prefigure, but it has certainly contributed to widening the gap. [5, 6, 7]

It’s easy to see how then practice and research can easily become estranged. But when you place these challenges into a field where there is



no common language, it may be easy to decide there is no specific IA research – the second major theme in our list above.

We certainly have good publications that try to spread seminal research ideas in IA as well as enlightened or useful best practices from the field. *The Bulletin of the American Society for Information Science and Technology* [8] is one of them. *The Journal of Information Architecture* [9] is another, more strictly connected to standard academic communication. We also have plenty of good international professional online magazines such as *Boxes & Arrows* [10] or *Johnny Holland* [11] and plenty of local ones such as the Swiss *UXMagazine* [12] and the Italian *Trovabile* [13]. You probably know a few more in German, Dutch or Japanese.

Challenges and opportunities. Again, it seems that the missing piece is communication, awareness of being part of a global conversation incorporating both research and practice. Speaking generally, practitioners can only be interested in research insofar as it has a direct connection to whatever project they have at hand. They are also typically not interested in furthering research upon reaching project completion. Academia has been trying to find ways to overcome this dichotomy. Action research, for example, tries to overcome this short-circuit by having researchers *de facto* embedded inside the problem solving and production process.

Professionally oriented research methodologies could help this conversation along. Maybe it is time to reconsider the relationship between IA (among many others) and user centered design, assign this latter its rightful place as one of the useful methodologies and tools in our toolbox, and think about ways action research, co-design or practice-led research could help us move the conversation further.

Very recently, for example, in “Maturing a practice” [14], Hobbs, Fenn and Resmini suggest that having the village of practitioners producing research might be difficult, but not impossible. Practice-led research (PLR) could provide one such way to kick-start a virtuous process. Practice-led research is mostly used in fields where the artistic, personal or design-related component of the field or discipline is largely dominant. Much of the research in the field is conducted by people who are already active in it and who, for the purpose, wear two different hats, researching into their own practice.

PLR would, for instance, allow a single research discussion to develop where otherwise dual conversations on research and on practice would exist. Hobbs, Fenn and Resmini conclude:

It is our suggestion that a broad uptake of PLR by practicing user experience designers and information architects could assist in the generation of knowledge and discourse and that this in turn could considerably assist in the maturing of the practice towards a discipline.

Should information architects learn more about practice-led research? This is one possible path, one we will be exploring during the next academic year. But is it the only path? Certainly, creating a robust discipline of information architecture (and user experience design) would require more than the active uptake of one single research method.

Questions relating research and practice are not new. Researchers have definitively been thinking and researching into the IA problem space [15] (major themes 2, 3 and 4), but as Resmini, Byström and Madsen argue in their article “IA Growing Roots” [16], connections between the different efforts are still thin and stretched, to the point of losing a great deal of momentum just because, as the attendees at the IA Summit remarked, there is no collective agenda and practitioners and academia stay on separated, non-communicating sides. We are back at communication again.

Roles and responsibilities. Several of the points identified in our conversations at the IA Summit touch on one more question that is central to the development of a common conversation between research and practice in IA: What are the respective roles and responsibilities? What do practitioners have to do to advance IA? What do researchers have to do?

Many through the years, and most recently Jeff Parks [17, 18], have outlined some pretty interesting ideas on the discipline and ways the community at large should engage in conversation around frameworks and methodologies. Peter Morville has worked to push the boundaries of the framing of the field itself. Jesse James Garrett has (famously) presented views on our role.

Other practitioner/writers such as Andrew Hinton [19, 20] and Christian Crumlish [21] have addressed the roles and responsibilities of the information

architect and have provided thoughtful articulations of the issues relating to their identities as IAs and the field at large. This kind of reflection on the role is scarce in IA research. A rather large number of information architecture research papers [15] work around the discipline, its status, its boundaries, its scope and goals, but they fail to address the information architect as an individual who is involved in IA research.

Possibly one of the most interesting ones has been put forth by Dan Klyn, who in a post on his blog *Wildly Appropriate*, titled “Job description: information architect” [22] offered his personal view of what the role of the information architect is in the field of practice. A version of this post, including his five-point definition, appears as the first article in this special section.

Looking Forward

To look forward, we return to the results of the information architecture session. If we exclude the very obvious – a willingness or necessity to keep the conversation going – we reach two conclusions: (1) Communication of the respective goals, agendas and advancements between research and practice is lacking, and (2) because of the way the field and the larger IA community has evolved, IA resources in the community are heavily skewed towards doing.

We certainly acknowledge that research has produced quite a number of papers: positioning papers, where opinions are voiced or general trends identified, and scientific papers on specific IA subjects. We believe it's time to turn research questions into practical ones and rigorously test some of the assumptions of the field. Second, practice has produced 15 more years of artifacts. It's time these are discussed, criticized and explained in a way that benefits the field at large and that produces factual and theoretical knowledge to be reused.

So to look forward we see the need for communication and for available resources. These requirements are really two faces of the same coin. We believe a large village of practitioners is needed to raise a discipline, and at the heart of the village is the need to communicate.

To communicate, we need channels. One central issue that should not be dismissed is the fact that most IA-specific conferences and events are

targeted at professionals, both in the way they are run and organized and in the way they stand in the face of academic relevance. This issue directly connects to a few of the observations in the list, namely to those that point out that there is no IA research proper and that there is a need for building long-standing bridges that stretch into the future. While we do think that there is definitely IA-specific research, unique perspectives can become lost when communicated in non-IA-specific channels.

To communicate we need a common language. Perhaps we need some middle-ground individual or organization, such as the Information Architecture Institute (<http://iainstitute.org/>) to act as a bridge or as a facilitator. As we disseminate information and cross-pollinate with other ideas, we create business opportunities for publishers such as O'Reilly or Rosenfeld Media.

Can we offer a specific strategic response? Perhaps not. But we can offer a few thoughts on the key actionable points that can push the conversation forward:

1. Build long-term relationships between researchers and practitioners. Student engagement is one such long-term strategy since students are currently in academia (close to where research happens). But students will someday be the leaders of the community of practice. Sponsor students to participate in relevant IA conferences.
2. Build up common channels and meeting points such as the Research and Practice session at the 11th ASIS&T IA Summit. Academic interests. Reintroduce academic space in major IA conferences to make them again relevant to researchers. Include representatives from the *Journal of Information Architecture* and other publications.
3. Actively promote published communication channels (*Bulletin of the American Society for Information Science and Technology*, *Boxes & Arrows*, *Journal of Information Architecture* and other professional magazines) to both sides in a way that helps mature them and their audiences.
4. Disseminate IA-specific conversations, clearly identifiable as such, in related communities, conferences and meetings, such as the human-

RESMINI and INSTONE, continued

computer interaction conferences and the ASIS&T Summits. IA needs to be visible and legitimate in more than one way.

5. And finally work toward a pre-conference meet-up consortium at the 12th ASIS&T IA Summit to move this discussion forward.

IA-specific research could assist in creating scientifically driven,

scientifically based knowledge. This research can support practitioners and help move IA from a conversation within a community of practice to a discipline. Bridging researchers and practitioners to work for the common good seems not only inevitable but also essential to foster growth and help the field mature into a discipline. Contributing to one single conversation will benefit both communities. And it's the only way to move the discipline forward. ■

Additional Napkin Sketches from “Bridging IA Research and Practice”

Here are some additional perspectives gathered on the back of the napkin at the session, “Bridging IA Research and Practice” a session co-hosted by the authors at the 11th ASIS&T IA Summit in Phoenix, Arizona.

Sketch A: www.flickr.com/photos/resmini/4511076085/in/set-72157623664715269/

What's the problem? Where is the research agenda? What are the high-level problems that need to be solved? What are the big questions that research needs to help us answer? A research agenda sets this direction. [Ref: No. 2 in the list of themes, statements and questions.]

Sketch B: www.flickr.com/photos/resmini/4511077501/in/set-72157623664715269/

One huge circle that has many cracks. That is the “practice” circle. One small circle off to the left: that is the “research” circle. The practice circle dominates and the research circle barely exists [point #3]. Very far apart and no connections. [Ref: No. 1 in the list of themes, statements and questions.] Also, the practices themselves are fractured.

Sketch C: www.flickr.com/photos/resmini/4511078061/in/set-72157623664715269/

(Front of the napkin): This is “Now.” Academy (research, teach) leads to Students (learn) leads Practice (apply). Arrows go in 1 direction only.

Sketch D: www.flickr.com/photos/resmini/4511078527/in/set-72157623664715269/

(Back of napkin): “Ideally.” The 3 Academy, Student, Practice for a triangle with exchanges across each side [Ref: No. 8 in the list of themes, statements and questions.].

Sketch E: www.flickr.com/photos/resmini/4511719030/in/set-72157623664715269/

“Research. Practice. Cannot do both. Cannot be in both places.”

Sketch F: www.flickr.com/photos/resmini/4511719466/in/set-72157623664715269/

“Research in...Cognitive psychology...Library science...HCI...Computer science...Learning sciences...Social psychology...etc.” They all lead to “Practice in Information architecture” and there appears to be a lot of money to be made. [Ref: No. 6 in the list of themes, statements and questions.]

Sketch G: www.flickr.com/photos/resmini/4511720490/in/set-72157623664715269/

“Theory” at the top of a tower, “Practice” at the bottom. An ivory tower? How does one make it up the stairs? Is that a technology component on the right?

RESOURCES on next page

Resources Mentioned in the Article

- [1] Davis, N. (2010, April). The practice of information architecture - It takes a village of practitioners to raise a discipline. Paper presented at the 11th ASIS&T IA Summit. Abstract retrieved June 12, 2010, from <http://2010.iasummit.org/talks/9766>.
- [2] Instone, K., & Resmini, A. (2010, April). Bridging IA research and practice. Session organized for the 11th ASIS&T IA Summit. Abstract retrieved August 2, 2010, from <http://2010.iasummit.org/talks/10489>. Unfortunately, no audio is available because of the way the session was conducted, with many people talking from different parts of the conference room. See also the Facebook group that Keith Instone maintains on the topic: www.facebook.com/group.php?gid=71553241741.
- [3] For the original, non-filtered list, which Keith Instone published on the IA Research and Practice group on Facebook soon after the 11th ASIS&T IA Summit, see www.facebook.com/#!/topic.php?uid=71553241741&topic=13148. Retrieved June 12, 2010.
- [4] Fogg, B.F. (2003). *Persuasive technology: Using computers to change what we think and do*. Boston: Morgan Kaufman.
- [5] This situation has been widely discussed, for example by P. Morville in his books and on his blog [6] and by A. Resmini and L. Rosati [7] in their approach to information architectures as ubiquitous ecologies.
- [6] Morville, P. (2010). *Ubiquitous service design*. Retrieved June 18, 2010, from <http://semanticstudios.com/publications/semantics/000633.php>.
- [7] Resmini, A. & Rosati, L. (2009). Information architecture for ubiquitous ecologies. *Proceedings of the International Conference on Management of Emergent Digital EcoSystems (ACM MEDES 09)*. Retrieved June 12, 2010, from <http://doi.acm.org/10.1145/1643823.1643859>. Note: full text availability limited.
- [8] *Bulletin of the American Society for Information Science and Technology*: www.asist.org/bulletin.
- [9] *Journal of Information Architecture*: <http://journalofia.org>
- [10] *Boxes and Arrows*: www.boxesandarrows.com
- [11] *Johnny Holland*: www.johnnyholland.org
- [12] *UXMagazine*: www.uxmagazine.it/
- [13] *Trovabile*: www.trovabile.org/
- [14] Hobbs, J., Fenn, T., & Resmini, A. (2010). Maturing a practice. *Journal of Information Architecture*, 2(1). Retrieved June 30, 2010, from <http://journalofia.org/volume2/issue1/04-hobbs/>.
- [15] For a preliminary list of papers, see <http://andrearesmini.com/blog/a-preliminary-ia-bibliography>.
- [16] Resmini, A., Byström, K., & Madsen, D. (2009). IA growing roots – Concerning the Journal of IA. *Bulletin of the American Society for Information Science and Technology*, 35(3), 31-33. Retrieved June 18, 2010, from www.asis.org/Bulletin/Feb-09/FebMar09_Resmini_Bystrom_Madsen.html.
- [17] Parks, J. (2010). The global community of practice. *JeffParks.ca*. Retrieved June 18, 2010, from <http://jeffparks.ca/index.php/community/the-global-community-of-practice/>.
- [18] Parks, J. (2010). Evolving the UX conversation. *Jeffparks.ca*. Retrieved June 18, 2010, from <http://jeffparks.ca/index.php/community/evolving-the-ux-conversation/>.
- [19] Hinton, A. (2005). *Architectures for conversation (ii)* [slide presentation]. Retrieved June 18, 2010, from www.slideshare.net/andrewhinton/architectures-for-conversation-ii-what-communities-of-practice-can-mean-for-information-architecture.
- [20] Hinton, A. (2010). *What am I?* Retrieved June 18, 2010, from www.inkblurt.com/2010/03/26/what-am-i/.
- [21] Christian Crumlish centered his salute to the 4th Italian IA Summit around this very issue. A barely discernible video of some 5 minutes of his talk is available at www.youtube.com/watch?v=KkiH1gwoMCg.
- [22] Klyn, D. (2010). Job description: Information architect. *Danklyn.com*. Retrieved June 18, 2010, from <http://danklyn.com/blog/?p=700>.