Face/Interface 2023 conference: Global type design and human-computer interaction

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The Face/Interface conference at Stanford (December 1–2, 2023, `face-interface.com`) was not a TEX conference, though it was announced on the TUG home page and in the TUG Mastodon and X feeds. Nevertheless, the connection to TEX was quite prominent: two keynote talks by Chuck Bigelow bookended the conference; DEK attended all presentations; many participants acknowledged that without TEX and LATEX their work would be much more difficult and tedious; among the keepsakes were offprints of *TUGboat* papers by Jacques André [1] and Kamal Mansour [3], presented as a gift from TUG and Bigelow & Holmes, a teaser for B&H's forthcoming books to be published by TUG, and also a reprint of calligraphy by Kris Holmes. Of course, the topics of the conference, including scripts, typefaces and encodings, also resonate with many members of the TEX community.

This conference marks forty years since the famous ATypI workshop on digital typesetting at Stanford which heralded a new era in typography. Fittingly, the principal organizer of this meeting, Thomas Mullaney, is a Professor of History. Indeed many talks at the conference were devoted to the history of digital typesetting in the last half-century. Thomas himself touched this topic in his opening remarks. Sorin Pintilie discussed the decisions implemented in digital type systems since the 1940s and their evolution. Ferdinand Ulrich presented a rich collection of artifacts from the ATypI workshop and beyond. It is a pity that due to copyright reasons his lecture could not be streamed on YouTube. I was told the recording will be available once stripped of the embargoed materials. I sincerely hope that among the artifacts Ferdinand *could* show are the photos of young DEK, Chuck Bigelow and Hermann Zapf. For now, we can include two photos from the private archive of Prof. Bigelow, cleared for publication in *TUGboat* (Figures 1 and 2).

Of course, the keynote and the final talk by Bigelow also dealt with the history of digital typesetting, with some nostalgic notes about the roads not taken and opportunities missed — for example, the demise of the program of teaching digital typography at Stanford, mostly due to the resistance of certain members of the Stanford arts community.

An interesting contrast with these talks was the presentation by Niteesh Yadav about the challenges for digital typography in the futuristic environment of virtual reality. The lettering there is displayed

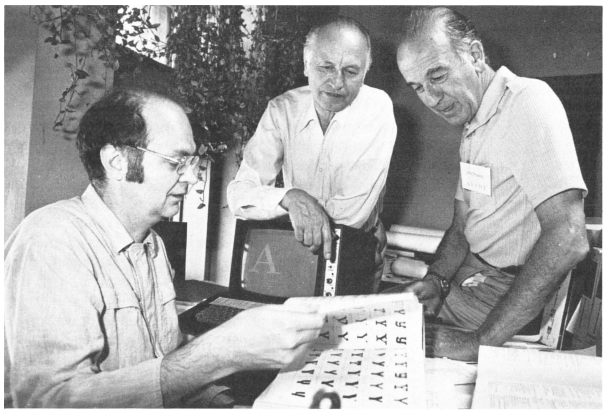

Figure 1: Donald Knuth, Hermann Zapf, and John Dreyfus (former president of ATypI, former typographic adviser to Monotype, book designer, acclaimed type scholar), in Don's office on a hot August day during the 1983 ATypI conference. Photo by an unknown photographer with the Stanford News Department. Reproduced by permission.

Figure 2: A photo from the 1983 Stanford conference, left to right: organizer Chuck Bigelow (with beard), Raymond Stanley Nelson, Jr. (Smithsonian Museum emeritus scholar of traditional printing technology), Henk Drost (hand punchcutter of the Enschedé type foundry in Haarlem, Holland). Photo credit: Hugh Dubberly. Reproduced by permission.

on an unpredictable background, often badly lit, which requires new solutions and new thoughts. This talk reminded that typography has always evolved answering the challenges of the medium, either ink and paper, or cathode ray tubes, or LCD displays, or low resolution printers — which led to novel technical and aesthetic decisions.

Another look at the way technology influences typography was presented by Shani Avni & Liron Lavi Turkenich, who discussed the changes to Hebrew letterforms brought by the printing press. In

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19th century typesetting, the thin ascenders and descenders tended to break down, and vowel marks were too expensive to add. This led to the considerable changes in the writing system. Some people are now considering undoing these changes, when and as technology allows.

An up-to-the-minute technological challenge is the rapid revolution in machine learning. Arshia Sobhan Sarband discussed the difficulties in training ML models to recognize the complex Arabic script. This talk touched on the topic of contamination of training data for such models: many images of Arabic "in the wild" are Western paintings, where nonsensical signs are used for "oriental exotics".

Another topic of the conference was also related to history: several talks described the creation of digital typefaces for ancient scripts. This is important work: the publication of ancient texts, their indexing and study require a uniform digital representation, both in Unicode and in a faithful typographic rendering. The participants presented a broad range of historical writing systems now being digitized: early Kufi script (Nadine Chahine); ancient coin lettering (Morgane Pierson); oracle bone script in the old China (Zhao Liu & Kushim Jiang); linear Elamite (Sina Fakour) and proto-Elamite (Kaveh Ashourinia); Dives Akuru used in Maldives (Fernando de Moraes Caro); Mayan writing system (Alexandre Bassi & Gabrielle Vail); Egyptian hieroglyphs (Andrey Glass; during the presentation the author announced the release of a new Egyptian font, that severely tests the limits of Unicode and OpenType technology). It is interesting that the Stanford program for digital typography also dealt with historical scripting system and Egyptian typesetting. In Figure 3 we reproduce a part of the PostScript font created by Cleo Huggins in 1988 [2].

One of the most important topics of the conference was the work for very much alive, but underserved languages, those that never had a digital representation before. During decolonization, people often turned to their roots, increasing the interest in their own scripts. It is not coincidental that the talk by Peter Bilak about *Typotheque*, a company involved in the design of fonts for many underserved communities, was titled *Giving Voice to People*. Decolonization involves the "roster of newly empowered voices asking for their narratives to be heard" [5]. One of the sponsors of the conference was SILICON, Stanford Initiative on Language Inclusion and Conservation in Old and New Media (`silicon.stanford.edu`). In his opening remarks Thomas Mullaney, who is also the head of SILICON, talked about its mission. He stressed that it is very important for the specialists outside the user communities not to slip into the role of White Savior, but learn to listen to the voice of the communities themselves, and recognize their right to choose their way of representing their language.

Figure 3: Woman and her occupations, from the font by Cleo Huggins [2]

Besides SILICON, several other organizations working with underserved languages sponsored this meeting or were represented there: the French Atelier National de Recherche Typographique (ANRT, `anrt-nancy.fr`), described by Thomas Huot-Marchand, the Arabic Type Unit at the American University of Beirut (`www.aub.edu.lb/msfea/research/Pages/ATU.aspx`), described by Yara Khoury, and Typotheque from the Netherlands (`www.typotheque.com`), presented by Peter Bilak.

The talks covered many newly digitized scripts, including Balinese (Ariq Syauqi), African languages (Neil Patel; his font specimen book was among the keepsakes of the conference), and Native American scripts digitized by *Typotheque* (Peter Bilak; their font specimen was also among the keepsakes).

In many cases we need not just scripts, but also input methods, as discussed in the talk by Khawar Latif Khan about entering Urdu characters.

Even when a language uses the Latin script, the voice of its own typographers should be heard in developing the fonts. This was a topic of the talk by Thomas Phinney, the recently elected ATypI President, with the strong title, *What if African Designers Created African Latin Fonts?* The author described the Google initiative of commissioning new Latin fonts for African languages from African designers. It is important to note that Google made the principled decision to pay the designers the same rates as used in Europe and North America.

The relation of typography and decolonization remind that the former is a human activity, and thus is closely intertwined with politics and social life. Hrant Papazian mused about this, and wisely noted that the recent move by Kazakhstan from Cyrillic to Latin may mean changing one colonial system to another. Fernando de Moraes Caro in his talk about Dives Akuru noted that after independence the government of Maldives commissioned a book about the script. The talk by Andrew Amstutz about Urdu touched the complex political issues

behind the use of Nastaliq for the language. Kourosh Beigpour presented a fascinating journey into the world of Farsi lettering in Los Angeles signs and other inscriptions, where Nastaliq script neighbored Hebrew, Armenian and other letters of the Iranian immigrants. The interplay of social and language aspects was also an important topic of the concluding talk by Chuck Bigelow, who touched on the related topic of language preservation and the difficulty of translation.

The interplay of typography and decolonization is, of course, a huge topic, and a single conference can only scratch the surface. While listening to the talks, I thought about Cyrillic, and how the decolonization of Ukraine was reflected in Ukrainian typography. On the verge of independence Ukraine took the symbolic step of reintroducing the letter Ґ (U+490 and U+491, uppercase and lowercase Cyrillic Ghe with upturn), which had been excluded from the alphabet by Soviet reform. Later attempts to design a contemporary Ukrainian typeface based on both traditions and modernity led to the creation of the Arsenal typeface by Andrij Shevchenko (`github.com/alexeiva/Arsenal`; a LaTeX support package is available at `ctan.org/pkg/arsenal`). The interest in Ukrainian typographic traditions inspired a number of historic typefaces by Bohdan Hdal (`bohdan.com.ua/tvory/t/shryfty`), and Ukrainian Cyrillic forms in the typeface Recht by Andriy Konstantinov (`minttype.com/recht`).

Non-Latin scripts are often very complex. They require the full set of possibilities offered by Unicode and OpenType technology. Therefore it is fitting that several talks at the conference discussed these issues. Neil Patel talked about the challenges of OTF when designing non-Latin scripts. Manish Goregaokar & Ben Yang described the process of adding a new script to Unicode. They used a smart pedagogical device: let's imagine the Latin script is not in Unicode; what hoops do its users need to jump through to get it included? By the way, I was surprised by the fact that Unicode technical committees accept photos of tattoos as examples of script usage.

The talk by Johannes Bergerhausen joined the historical and underserved scripts describing great presentation of Unicode at `decodeunicode.org` and a book with many font samples for different writing systems. Johannes also presented another of his designs: a poster available at `worldswritingsystems.org`. The poster is a smart way to demonstrate the diversity of the writing systems. It takes one character from each script, using different colors for dead and living systems, those represented in Unicode and those not yet there. This poster too was among the conference keepsakes.

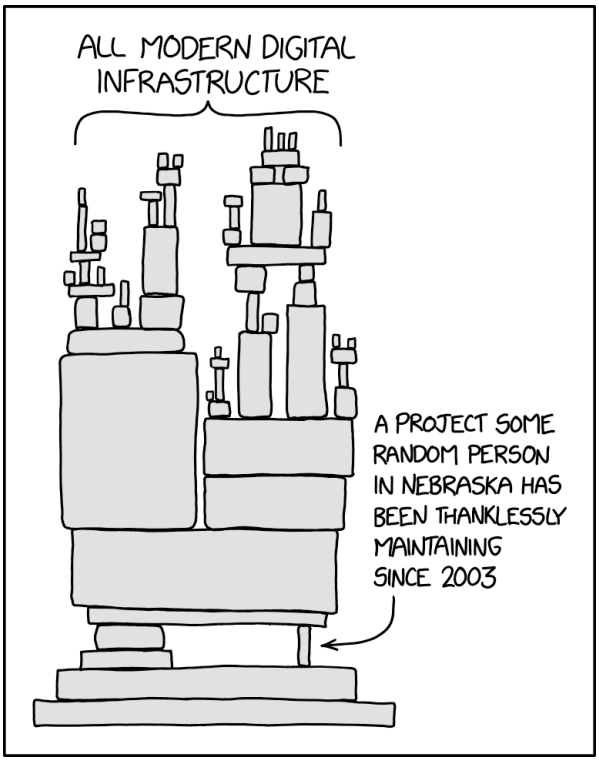

Figure 4: Dependency, from [4]

The huge work required to move a script from the category "not yet digitized" to fully digitized was vividly described in the talk by Anshuman Pandey, who has digitized a large number of scripting systems.

The conference made clear the amount of work done by volunteers and underpaid students. While Unicode and OpenType are now fundamental parts of computing infrastructure, they depend on enthusiasts who are willing to "spend a part of their honeymoon researching Yi syllabary", as one of the presenters at the conference did. I have cited the classic XKCD comic [4] several times in my papers and articles, but cannot help doing it again (Figure 4).

I have mentioned keepsakes several times in this article. The organizers and attendees gave away a large number of beautifully typeset materials (Figure 5), which was all the more surprising for a conference with no registration fee.

To summarize, it was a very interesting conference, showing the deep relationship of typography to history, art, science, technology, and our human way of life.

The organizers promised to post the recordings of the talks, which will be of great interest to the community.

Figure 5: Conference keepsakes

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References

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