## Pierre MacKay, 1933–2015

Barbara Beeton

Pierre was an early adopter of TeX, and a very early member of TUG; his name first appears in a membership list in June 1981. In November 1982, he and Rick Furuta at the University of Washington assumed the duties of Unix site coordinators, a task that Pierre continued to perform until 1992.

An enthusiastic supporter of TUG, Pierre was elected president and served in that capacity during 1983–1985. He remained on the board until 1991, and was always a source of good advice and good cheer.

Pierre's primary interest was in the study of classical Greek and Arabic literature. His early studies were largely based in Greek, but needing a second classical language, he began his study of Arabic. Later, he taught himself Ottoman Turkish. Some of his first publications concerned medieval Arabic literature. In 1966, he accepted a job at the University of Washington, because their classics program included a Near East Studies program that allowed him to pursue all his main research interests while teaching the same subjects.

By the end of the 1960s, he became interested in the potential use of computers and computer languages for non-Western scripts, and was an early adopter of computerized text processing and typesetting. Working with a colleague in Ottoman studies who was an amateur Arabic-script calligrapher, he developed the first digital typesetting font in Arabic. In 1980, in addition to his positions in the departments of Classics, Near Eastern Languages and Literature, and Comparative Literature, he became an adjunct member of the Department of Computer Science. (A busy man!)

When TeX and Metafont arrived on the scene, Pierre climbed onto the bandwagon, and immediately started to work on adaptations for Arabic script. In a brief 1983 *TUGboat* announcement [1], he noted that "[for] this we must extend and modify the basic program, but we are making every effort to ensure that our Arabic Script version of TeX will be an enhancement, and will leave all the basic features of TeX82 intact." Pierre made good on his intention. In 1987, he and Don Knuth together wrote an article for *TUGboat* announcing "Mixing right-to-left texts with left-to-right texts" [2]. Lacking actual R-to-L fonts, the effect was simulated using mirrored latin Computer Modern with examples inspired by "Through the Looking Glass" (see the excerpt below). The standard conventions for interleaving and line-breaking were properly observed.
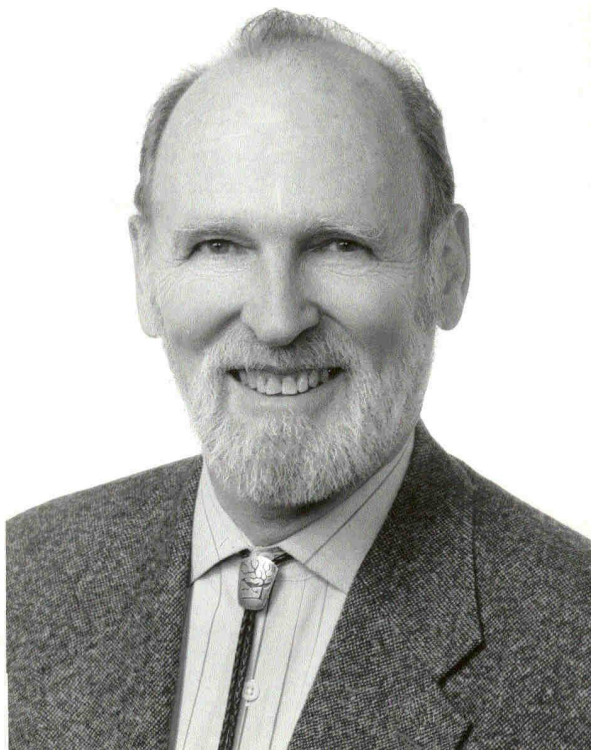
Also in 1987, the annual TUG conference was held in Seattle at the University of Washington, with Pierre as the local host. The topic that year was TeX for the Humanities, a subject dear to him.

With Pierre's urging, the university obtained various TeX-capable output devices, including an Alphatype CRS, the same machine used to produce the final camera copy of Don Knuth's *Computers & Typesetting* series. Since one of these machines was also in use at AMS, Pierre was a ready sounding board when the hardware proved recalcitrant.

Another project that he assisted, although more with moral support than active participation, was the creation of the "Washington cyrillic" font, `wncy`, through his "matchmaking" between a staff member at the UW Humanities and Arts Computing Center and the AMS, rebuilding and extending, for inclusion in the `amsfonts` collection, a proto-cyrillic font based on Computer Modern originally created at the AMS [3].

After his retirement from the University of Washington in 1990, Pierre separated himself from the "formal" TeX community in order to devote his energies to the scholarship he felt still needed doing. He could still be detected from time to time on `texhax`, sharing his copious knowledge with others who needed help. On June 14, 2015, while working on the New York Times crossword puzzle, Pierre passed away so quietly that the pencil remained in his hand.

7. Multi-level mixing.   The problems of mixed R- and L-typesetting go deeper than this, because there might be an L-text inside an R-text inside an L-text. For example, we might want to typeset a paragraph whose TEX source file looks like this:

```
\R{Alice} said, \R{''You think English is \L{'English written backwards'};
but to me, \L{English} is English written backwards.  I'm sure \L{Knuth}
and \L{MacKay} will both agree with me.''}  And she was right.
```

An intelligent bidirectional reader will want this to be typeset as if it were an R-document inside an L-document. In other words, the eyes of such a reader will naturally scan some of the lines beginning at the left, and some of them beginning at the right. Here are examples of the desired output, set with two different line widths:

(Look closely.)

Excerpt from "Mixing right-to-left texts with left-to-right texts" [2], p.17.

I treasured Pierre's friendship, and miss him greatly.

Photos and information on Pierre's non-TUG life have been supplied by Diana Gilliland Wright, who shared the last years of his life. We are greatly indebted to her for her kindness, and thank her warmly.

References

[1] Pierre MacKay, "TEX for Arabic Script",
    TUGboat **4**:2, page 72.

[2] Donald E. Knuth and Pierre MacKay,
    "Mixing right-to-left texts with left-to-right texts",
    TUGboat **8**:1, pages 14–25.

[3] Barbara Beeton, "Mathematical symbols and cyrillic fonts ready for distribution",
    TUGboat **6**:3, pages 126–128.

Some links to web pages telling Pierre's story:

A brief TUG interview:
`http://tug.org/interviews/mackay-p.html`

A memorial by Diana Wright:
`http://surprisedbytime.blogspot.ca/2015/06/pierre-antony-mackay.html`

A remembrance by an archaeologist familiar with Pierre's interest in Venetian and Ottoman Greece:
`https://mediterraneanworld.wordpress.com/2015/06/15/pierre-mackay/`

An account by Pierre concerning his identification of a manuscript that proved to be the missing original of a renowned work by an 18th century Ottoman author:
`http://surprisedbytime.blogspot.com/2011/06/evliyas-manuscript.html`