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Verba Volant, Scripta Manent

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Cover Page Footnote
I am grateful to Gunther Cornelissen for the conversations that led to the writing of this article.

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Abstract

"Most people think typography is about fonts. Most designers think typography is about fonts. Typography is more than that, it's expressing language through type. Placement, composition, typechoice."

(Mark Boulton)

Using examples, we attempt to prove the following assertions. None is original to the author, and each is readily contested. As a courtesy, the examples are artificially constructed rather than taken from the mathematical literature.

- Mathematical notation can either help or hinder the reader.
- Commutative algebra and harmonic analysis can be made more or less difficult by font choices.
- Making deliberate choices about line and page breaks can help or hinder the reader.

The so-called grid method in arith- metic amounts to this. To work out 13×15, think of $(10+3)\times(10+5)$ and expand: 10×10, 10×5, 3×10, and 3×5. Then we add 100, 50, 30, and 15 to obtain 195.	The so-called grid method in arith- metic amounts to this. In order to work out 13×15, we think of $(10 +$ $3) \times (10 + 5)$ and expand: 10×10, 10 $\times\, 5, 3 \times 10,$ and 3×5. Then we add 1 $00, 50, 30$ and 15 to obtain 195.

To avoid confusion, we denote the character group of a locally compact abelian group G by $\widehat{G}$, and the annihilator of a subgroup $H < G$ by $H^{\perp}$. Then for a closed subgroup H of G, we have isomorphisms of topological groups as follows: • $\widehat{G/H} \cong H^{\perp}$; • $\widehat{H} \cong \widehat{G}/H^{\perp}$; • $(H^{\perp})^{\perp} \cong H$, under the identification between G and the character group of $\widehat{G}$ given by Pontryagin duality.	To avoid confusion, we use the same letter in different fonts, denoting the character group of a locally compact abelian group G by $\mathcal{G}$, and the annihilator of a subgroup $H < G$ with $\mathscr{H}$. Then for a closed subgroup H of G, we have isomorphisms of topological groups as follows: • $\mathcal{X} \cong \mathscr{H}$ where $X = G/H$; • $\mathcal{H} \cong \mathcal{G}/\mathscr{H}$; • $\mathscr{X} \cong H$, where $X = \mathscr{H}$, under the identification between the character group of $\mathcal{G}$ and G.
Let R be a valuation ring of a field K and assume that we have $R \subset R' \subset K$ with $R \neq R'$. Let M be the maximal ideal of R, and let P be the maximal ideal of R'. Then • $P \subset M \subset R$ and $P \neq M$. • P is a prime ideal of R and R' is the localization R_P. • R/P is a valuation ring of the field R'/P.	Let $\mathfrak{R}$ be a valuation ring of a field $\mathfrak{K}$ and assume that $\mathfrak{R} \subset \mathfrak{R}' \subset \mathfrak{K}$ with $\mathfrak{R} \neq \mathfrak{R}'$. Let $\mathfrak{M}$ be the maximal ideal of $\mathfrak{R}$ and let $\mathfrak{P}$ be the maximal ideal of $\mathfrak{R}'$. Then • $\mathfrak{P} \subset \mathfrak{M} \subset \mathfrak{R}$ and $\mathfrak{P} \neq \mathfrak{M}$. • $\mathfrak{P}$ is a prime ideal of $\mathfrak{R}$ and $\mathfrak{R}' = \mathfrak{R}_{\mathfrak{P}}$. • $\mathfrak{R}/\mathfrak{P}$ is a valuation ring of the field $\mathfrak{R}'/\mathfrak{P}$.
"90 percent of design is typography. And the other 90 percent is whitespace." (Jeffrey Zeldman [2])	"90 percent of design is typography. And the other 90 percent is whitespace." (Jeffrey Zeldman [2])

References

[1] M. Boulton (2015), in `https://typography.guru/quote/`

[2] J. Zeldman (2015), in `www.zeldman.com/2015/12/24/the-year-in-design/`