THE OBSCURE CONVERGENCE OF

THEOLOGICAL PUBLISHING AND TECHNOLOGICAL INNOVATION

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Once upon a time, the Prix Ars Electronica — a festival that celebrates the convergence of technology and the arts — would have taken place under the sponsorship of [2] Bishop Schmidt of the Diocese of Linz, or of His Eminence [3] Christoph Cardinal Schönborn, Archbishop of Vienna. [4] Theology, as the Queen of Sciences, would preside with grace and generous affirmation at our symposium, celebrating the contributions of such great religious scientists as Bacon, Cusanus, Copernicus, Kepler, Boyle, Newton, Linnaeus, Leibniz, Mendel, and countless others [5]. But although many of the West's greatest technological thinkers have been active Christians, and although some church people are doing admirable [6] tech work, and although sometimes theological discourse [7] shows up in technological settings [7], nowadays technologists and theologians often seem to be talking [9] past [10] each [11] other. [12]

One can explain the disjunction in a variety of ways. Tech geeks frequently perceive Christians as theocratic despots [13] who want nothing more than to assimilate everyone to their dogmatism — and the conduct of some Christians [14] warrant such suspicions. On the other hand, some theological leaders approach technology with profound doubts; church authorities frequently evince [15] "replacement panic," the heightened dread that digital existence and communication will undermine and eventually supersede physical interactions. Such caricatured antipathy trades in [16] mutual ignorance, and it handicaps the fullest efforts of each party. Technological innovators stand to gain a great deal by engaging with ecclesiastical communities, and ecclesiastical communities stand to benefit from advancing closer to the cutting edge of digital technologies.

The benefits for the church are obvious: a large part of our ministry involves [17] communication and attention, and digital technology affords an unparalleled vehicle for these. Moreover, to the extent that people devote more and more of their energies to digital technology, it behooves the church not to abandon the digital dimension, but to [18] *indiginate* itself online. The benefits to technological innovators are less obvious, but every bit as weighty. The churches constitute a vast, well-established social network of ordinary civilians with a strong presence around the world, with considerable economic impact. [19] Whatever the appeal of such ecclesiastical junk food as The da Vinci Code and Left Behind — manifestly it rests on something other than literary quality [20] or theological insight — the impact of these print-media publications demonstrates a public's ravenous appetite for theological information. Technologists who collaborate with church groups have a great opportunity to observe their ideas in action. And everybody benefits when patient attention supplants uninformed dismissal. [21]

If techs and theos were in fuller conversation, someone might already have pointed out that many of the concerns that have energized Creative Commons/EFF/new media activists had already affected the nineteenth century. At the beginning of the 1800's, [22] printing presses still operated by hand; only in 1810 was the steam-powered printing press patented, and only in the 1820's [23] were steam presses becoming generally available.[1] At the crest of this very disruptive technological innovation, a provincial clergyman came to Paris and used the new media of 19th-century Europe to disrupt both the publishing industry and the Catholic Church. [24] Jacques Paul Migne, an undistinguished ecclesiastical troublemaker from Orléans, arrived in Paris in the 1830s [25] and set about establishing a religious newspaper, ostensibly neutral in politics (NPOV) [26], but inevitably colored by Migne's own control of the newspaper's operations. Migne's *L'Univers religieux* succeeded rapidly: partly because his ultramontane Catholi-

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[1] Cf. "Printing Press," <http://en.wikipedia.org/wiki/Printing_press#The_Industrial_Revolution>.

cism fit well the temper of Paris during the July Monarchy, and partly because of Migne's own genius for innovation. Migne stayed in the newspaper business less than a year, only long enough to build circulation to a respectable figure and sell *L'Univers* off at a tidy profit — but during that year he discovered the most efficient means of editing a paper. He copied articles wholesale from his competitors. [27]

"*L'Univers* copies everything.... [It] is short two or three columns to fill a particular volume: quick a pair of scissors; in two minutes it will have solved its little problem...."[2]

When Migne used his bankroll to return to the newspaper business (founding among other papers *La Voix de la verité* which, after being sold and changing its name, became — which survives today as [28] *Le Monde*), he pioneered a system of gathering reports of interest from other newspapers and reprinting them unaltered, save for an introductory phrase naming the source: "One reads in the *Gazette des tribunaux*...." In fact, Migne made an explicit *point* that he stole this material from other journals; it demonstrated, so he claimed, the purity of his NPOV publishing practices. Migne made a fortune, in effect, by inventing the process of scraping [29] news feeds and republishing them — 'scraping', that is, [30] copying eye-catching stories from other sources and [31] redistributing them under the spammer's own brand, with the spammer's own advertising — in much the same way that the [32] *Huffington Post* [33] and sleazy websites do today.

Migne's newspaper business flourished, and from the proceeds he began assembling the dominant force in publishing in mid-century Europe. At a time when steam presses were still unusual in France, [34] Migne maintained five presses running continuously in his headquarters, *Ateliers catholique*. To put those five presses in context, there were roughly [35] fifty other steam presses in all of the *départment de la Seine*, which was itself the most industrialised printing centre in France ([36] only 117 steam presses in

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[2] Bloch, 26, quoting Picot, editor of the competing paper, *Ami de la religion*.

France at all as of 1861).³ At the height of his operation, Migne employed about three times as many workers as the famous Didot publishing house.

Publishing and, in a certain sense, "editing" several newspapers at once did not satisfy Migne, however. He had greater things in mind. With the power of the steam press at his disposal, and with the brilliant insight that he could publish other authors' work without paying them, he launched his magnum opus: the Latin and Greek Patrologies that are now known in the theological fields simply by his name. [36] Migne published a Universal Theological Library comprising 25 volumes of biblical commentary, a 25-volume of encyclopædia of dogmatic theology, an 18-volume anthology of Christian apologetics, 99 volumes of sermons, a three-series Christian encyclopædia totaling 169 volumes, a history of the church in [37] 27 volumes, a 13-volume anthology in praise of the Blessed Virgin Mary, and 150 miscellaneous works. Apart from the [38] 218 volumes of the Patrologia Latina and the 166 volumes of the Patrologia Graeca.⁴

By the way, not only did Migne uniquely exploit the power of steam printing presses, he also pioneered the business model of *crowd-sourcing*. He offered these gargantuan encyclopædic series by soliciting monthly payments from subscribers around the world.

The premise of Migne's Patrologies is unimpeachable: by reprinting the works of theologians who had been dead for centuries, most of them for more than a millennium, he served the church's need for educational nourishment while at the same time encountering no inconvenient accusations of plagiarism [39]. The only catch to this plan was that sometimes the best editions of the ancient theologians had been published within the (minimal) [40] interval protected by copyright. While most of Migne's editions relied on legitimate public-domain sources [41], he did not allow the formality of copyright to stand in his way. Migne would offer editors paltry licensing fees, threatening to print an older, inferior alternative if the editor of the superior version did not agree to

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³ Bloch, 15.

⁴ Bloch, 1-2. And apart from the 85-volume edition of the Greek Fathers translated into Latin.

terms. And sometimes, characteristically, he went ahead and published the copyrighted edition. If Migne's steam-powered newspapers were the partisan print version of Google News's web scraping, his Patrologia was in certain respects a theological-literary Napster. [42]

Nor was Migne's approach unique. In Edinburgh, the firm of T & T Clark began commissioning fresh editions and translations of the same works that Migne was pirating in France. [43] Unfortunately, the cost of paying editors and translators surpassed the interest that T & T Clark could generate, and they discontinued the series to cut their losses. Over in the USA, however, where copyright law did not protect foreign works, the [44] Right Reverend Arthur Coxe gathered up T & T Clark's volumes and compiled them into a series with his own introductions. T & T Clark (having invested so much in the editions) protested vigorously on both legal and spiritual grounds; the collected volumes had done so well in the US that Coxe's publishers offered Clark a licensing fee of $125 per volume — little enough, but a great deal better than Clark had been doing on the books before they were pirated [44]. Coxe and his publishers extended the series, adding further pirated or extorted translations. Since then, the [45] Ante-Nicene and Post-Nicene Fathers have been reprinted continuously for more than a hundred years, and to this day is frequently found in English-speaking pastors' libraries (though usually unread).

One more example: [47] Charles M. Sheldon's famous book [48] *In His Steps*, the book that popularised among Protestants the question "What Would Jesus Do?" [49], was published with a defective copyright notice (the publisher submitted it to the copyright office with only one copy, not two, as was required). As a result, publishers in the US and abroad prepared their own editions of the public-domain best-seller, and Sheldon reputedly received only $275 in royalties for the 25 million copies of the book in print.

So this morning, I'm asking you to imagine the tremendous appetite for theological media (as witness The da Vinci Code and Left Behind), and the historic examples of Migne, of Ante-Nicene Fathers series, and of In His Steps, and situate all of this in the context of the transition into digital media that Ars Electronica celebrates. As the matter of copyright in an age of digital reproduction becomes increasingly vexed and as the pressure for Open Access publication increases, theological publishing might serve as a very useful fishbowl for tech innovators.

The first steps have been taken, and so far they come a good deal short of a revolution. The Ante-Nicene and Post-Nicene Fathers series that Bishop Coxe pirated more than a hundred years ago [50] has been digitised and marked up in a good XML format, but (a) they have established avenue for supporting print versions of their library coordinate with the digital versions and (b) [51] they assert copyright control over their marked-up versions. Various other sites online have developed libraries of out-of-copyright and soft-pirated versions. Everyone knows there's a brisk traffic in badly-scanned PDFs of textbooks and other prominent literature. Yet no one, no organisation has broken through to offer open-access digital works in a comfortably readable non-proprietary format, in a form that permits congruent comparison to printed books.

Look: we know that the conditions for publishing will undergo some sort of convulsive change in the next few years. That change won't displace books, but it will involve a much more robust, more sophisticated, and (we may hope) vastly more open exchange of digitally-distributed literature. [52] The digital media and print media media afford different advantages: digital media afford shareable, searchable, downloadable, disposable texts; [53] print media afford durable, artifactual, ownable texts. In order to trigger the convulsive change in literary media someone, some organization, should to advance an open, attractive format (what we might call 'Open PDF') that published works of vivid interest to a large recognisable community, that represents its textual content in a complementary relationship with print editions. When access to media is open, and the for-

mat is open, and the community is drawn together on the basis of shared interest, we will not only have provided the basis for a new model of institutionalised publishing, but will also have provided users with the tools and incentive to participate in the production of [book-like] knowledge. [54]

What then shall we do? Until we attain a universal open-access, we can support the premise of modest-duration copyright legislation, support open-access journals. Most realistically, we can pay attention to the role of technology in disseminating the works that we produce. Learn about semantic parsing, and clean XML and CSS mark-up. At the very least, we should remember that all these topics, interests, facilities, practices, are *in play* — and we should resist lazy caricatures about beardy antisocial hackers or heedless cultural vandals.

Complex systems ten to resolve themselves toward the path of least resistance. Digital technology is built to make identical copies — that's what it's *for*. Your web browser makes copies of copyrighted material on your local computer; even the University's web caching software makes and stores copies of websites. In order to fend off technologies' capacity to produce identical copies, publishers have to invest extra money and research and development to make it more difficult to do what the technology itself does immediately, and of course consumers are made to pay for the special *un*-reproduction mechanisms along with the texts and recordings that they want. (You don't have to buy an antirecording extra when you buy a vinyl LP, remember.) Moreover, it will always require less work to defeat anti-reproduction devices than to construct them, so that the investment is intrinsically futile. Eventually, publishing systems will give over attempts to impose non-reproducibility (as, for instance, iTunes and Amazon no longer encode antireproduction devices in their music sales). (Note that music sales haven't dropped off since the vendors took that step.)

We got Migne and the AnteNicene Fathers series when churchpeople ignored copyright. While we may not want to defy law so directly, especially in this reactive atmosphere, we can work positively toward a different model. Pirate Bay as perfect frictionless library.

— A great many of the texts we study are already in the public domain

— What if each PG student took on responsibility, as part of her progression, to produce an edition or translation of a work in the public domain and distribute it under a Creative Commons license? As a benefit, she would know the work itself inside and out; she would better understand the processes of publishing and semantic mark-up; and her edition of, say, Aquinas's commentary on Ephesians?

— Obstacles: page/¶/§ numbers!