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Monasticism and Mathematics

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More than forty years ago Arnold Toynbee predicted that twenty-first century historians would be more interested in the interaction between Buddhism and Christianity than in the tensions between communism and capitalism. His prediction is promising, given the decline of communism. However, it may still be quite a leap to anticipate our future connection to the relationship between these two major world religions.

The thesis of this article is that we as mathematicians already have a great deal in common with monastics. Consider four parallels:

1. We are both ascetics.

Ascetics are commonly thought of as people wearing hair shirts and practicing mortification of the flesh. You may have conjured up an image of a monk but the general public could have easily substituted a mathematician. To the public who typically disdains algebra, the process of advancing a dozen or so levels beyond calculus may seem less desirable than the hair shirt.

2. We are both cloistered.

Mathematicians usually practice their faith (in the discrete or the continuum) in a college or university. They rarely glimpse the relationship between their religion (mathematics) and the eventual real world applications of their work. Monks likewise spend much of their time in activities (such as prayer), where the link to influence in the outside world is uncertain.

3. We share an attitude that money causes debasement.

Bertrand Russell never quite recovered from the seven year stress of writing *Principia*. He lost several hundred dollars in publishing his work. *Principia* is a hallmark of intellectual accomplishment and though not mathematics, is revered by most mathematicians.

After completing my third book this year I have done a little better financially than Russell's negative earnings. But I was recently volunteered to present a mini-

course next year at a northeastern conference. When I embarrassedly brought up the issue of honorarium, my colleague told me that the budget was very small for the conference. I volunteered to give the course for free.

The next day my sister-in-law was chatting about the fee a consultant was getting to deliver a two day writing seminar at her office—\$30,000. When my jaw rebounded from the floor, my sister-in-law comforted me by adding that there were three extra days that the consultant would be involved with their company as part of the fee.

With two small children needing college educations in twenty years, I encourage a gradual financial debasement within our mathematical community. After all, the best selling CD in Europe last year was "Chant", authentic Gregorian chants from the Benedictine monks of Santo Domingo De Silos. The monastics may be leading the way for us.

4. Paradox inheres in monasticism and mathematics.

Thomas Merton, a celebrated Trappist monk, said of himself, "I find myself travelling toward my destiny in the belly of a paradox." He went on to elaborate that life (in his view) was almost totally paradoxical and that the very contradictions in his life were signs of God's mercy. The mercy was evidenced by his ability to function in light of his insecurity and confusion over the ubiquitous paradoxes of life [1]. According to Merton, both Christian and Buddhist monks are "poured out into the world" by bearing witness to the contemplative experience. This pouring out into the world while removing oneself from the world is a grand paradox. By every measure our world is increasingly reaching out to monastics for their example in our troubled times.

After his ascetic ordeal of seven years, Bertrand Russell failed (in *Principia*) to provide mathematics with a secure foundation in logic. Goedel later showed

us that the axiomatic method possessed intrinsic limitations even when confined to the natural numbers. According to Ernst Snapper, "It is evident that such a foundation is not necessary for technical mathematical research, but there are still those among us who yearn for it. The author (Snapper) believes that the key to the foundations of mathematics lies hidden somewhere among the philosophical roots of logicism, intuitionism, and formalism" [2]. We push the frontiers of mathematics possibly "in the belly of paradox."

CONCLUSION

In a moving ABC documentary, entitled *The Monastery*, interviewers visited a Massachusetts monastery. They gained exquisite access to the candid and private feelings of the monks. One monk questioned his life, saying that he had no direct evidence that God existed. Another admitted his pain at not having had a family. Their touching honesty suggested that they had seldom if ever discussed these issues.

A decade later, it may be time for us to discuss the relation between our isolating and esoteric mathematical endeavors and their long-term influence toward people. Both monastics and mathematicians currently live in a shadow world, when it comes to understanding our long-term effects upon society. If monastics can open themselves up to scrutiny by television, perhaps mathematicians can follow suit and candidly discuss the role of mathematicians in society. We may need help from qualitative psychologists like the visionary Amedeo Giorgi. The Berlin wall has fallen; it is time to break the more formidable walls separating collegiate disciplines.

REFERENCES

- [1] Henry, Patrick and Donald Swearer. *For the Sake of the World*. Minneapolis: Fortress Press, 1989.
- [2] Snapper, Ernst. "The Three Crises in Mathematics: Logicism, Intuitionism, and Formalism", *Mathematics Magazine*. 52: 4, Sept. 29. 1979, p.214.

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