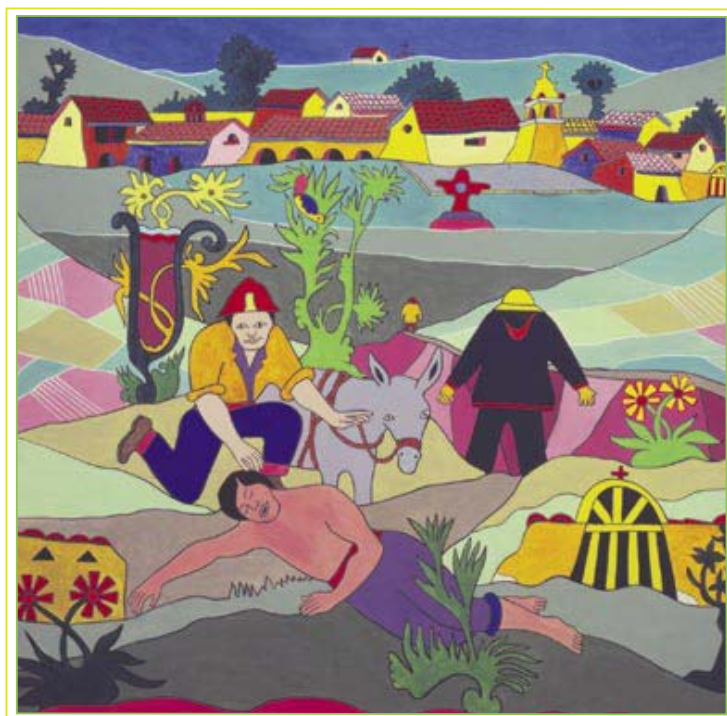


Matching a Publishing Model to Board Values

A Decision Analysis for the
American Society of Missiology



The Southern Shift

Arnold • George • Harries • Hiebert
Hurteau • Laing • Guzmán • Tinou

Betsy A. Northrup
Capstone, Spring 2006

University of Kentucky
Martin School of Public Policy and Administration

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Executive Summary

Statement of the Problem

Faced with declining revenue, increasing print costs, and an increasingly electronic world, The American Society of Missiology (ASM) has to make a decision and can choose between three alternatives: 1) Continue to publish its quarterly journal, *Missiology: An International Review*, using its current print-only model and contracting out on-line availability to the American Theological Library Association (ATLA); 2) Accept the offer of a commercial firm in the United Kingdom to manage, publish, and distribute *Missiology* in return for immediate on-line availability, increased exposure through marketing, and a guaranteed modest income for the Society; or 3) Invest in the Society's capacity to offer *Missiology's* content on-line on their own website.

Research Question

Based on the values of the Society's Board of Publications, the economic realities of the Society, and the financial offer on the table from a commercial publisher, which publishing model is the best choice for the American Society of Missiology?

Methodology

The tool used for this decision analysis is the Multi-Attribute Utility Model (MAU). The MAU model involves the following steps: 1) Determine the attributes and objectives that are important to the decision; 2) Create a scale of possible utility levels for each attribute; 3) Assess the value of each attribute and assign a corresponding utility score; 4) Estimate weights to apply to each utility score; 5) Calculate utility for each alternative using the additive model: $U = \sum_i W_i U(A_{ij})$; 6) Make a recommendation based on the highest utility score. In addition, I conducted a scenario analysis of the publishing models using existing and averaged figures.

Findings

The average individual MAU score was 10.48 points higher for Alternative Two (commercial model), with a median of 6.5 and a range of 34. One individual was indifferent with the same score for both models, and one individual score was .31 points higher for the ASM model. The results from the MAU Model for the Board as a whole strongly favored Alternative Two (Commercial publisher) with 75.52 points, 9.06 points higher than the score for the ASM model. The scenario analysis revealed more revenue stability in the commercial model but the potential for greater profits with the ASM model if the Society can hold expenses to 10% annually.

Recommendation

Given the stated values of the Board of Publications and the shrinking revenue base, I recommend the American Society of Missiology partner with a commercial publisher in order to offer immediate on-line access and broad dissemination of *Missiology: An International Review*.

Identification of the Problem

Scholarly journals used to be the touchstone of academic communication. But what was once “a manageable, balanced system in which scholars created reports of their discoveries, scholarly societies added value by vetting publications for quality, editing them, and publishing them, and libraries did most of the disseminating” (www.CreativeChange.org) is now a complicated mixture of public goods and private enterprise, and publishing scholars are caught in the middle.

As university research flourished 30 years ago and more scholars sought publication, the ostensibly timeless system that had worked so well for so long became overburdened and underfunded. Commercial publishers — recognizing an opportunity for profit in the exchange of ideas and equipped with the capacity to achieve economies of scale — stepped in and many in academia saw them as a solution. Small scholarly societies especially were eager to give the business aspect of their journal away (i.e. production, printing, distribution, subscription management) as long as they maintained what was of critical interest to them — editorial control.

ASM finds itself publishing within this rapidly changing context. In spite of healthy advertising revenue and high manuscript submission, *Missiology*'s subscription revenue dropped 21% from \$57,121 in 2004 to \$47,139 in 2005. Simultaneous with this decline was a 710% increase in royalties received from the on-line editions (ASM received \$439 in 2004 and \$3,556 in 2005). Compounding the problem of declining revenue, was a significant increase in postal rates (5.4% for domestic; 7-8% for international) and a 5% increase in paper costs. This increased the cost per unit by more than 10%.

Faced with diminishing revenue, growing print and delivery costs, and an increasingly electronic world, The American Society of Missiology (ASM) has to make a decision and can choose between three alternatives.¹

- 1) Continue to publish its quarterly journal using its current print-only model and contracting out on-line availability to the American Theological Library Association (ATLA). ATLA makes *Missiology* available to its subscribers via its website but must observe a 12-month moving wall.²

- 2) Accept the offer of a commercial firm in the United Kingdom to manage, publish, and distribute *Missiology* in return for immediate on-line availability, increased exposure through marketing, and a guaranteed albeit modest income for the Society.
- 3) Invest in the Society's capacity to offer *Missiology's* content on-line on their own website.

The decision facing the Board of Publications at ASM is not easy, especially for people who are trained missiologists and mostly removed from the business side of academic publishing. As Donna Shalala said, "...you can't make the right decision if you don't have the necessary competence. You cannot keep a discussion focused on the merits unless there is a grasp of the relevant facts, a clear understanding of the competing arguments, and a fair assessment of the interests at stake" (Shalala 2004:351). With that in mind, this decision analysis is designed to inform the decision-makers of the merits, arguments, and possible outcomes of each alternative.

Organizational Context

The American Society of Missiology (ASM) was founded in June 1973 by a group of 45 people concerned about the future of mission studies in the United States. With \$250 from the American Society of Professors of Mission and a \$4,000 editorial office budget from Fuller Theological Seminary, the first issue of *Missiology: An International Review* was published. One of the founding leaders of ASM, Dr. Ralph D. Winter, president of William Carey International University, wrote of his motivation for starting the Society:

...the most insistent motivation I had in working toward, and then with, the ASM, was the stubborn fact that Fuller's President, David Hubbard, had been renegeing for some time on an earlier agreement for the School of World Mission to offer a doctorate. He was proceeding on the basis that missiology was not a valid academic field. Witness the fact, he pointed out, that it had no scholarly society nor scholarly journal to register its legitimate existence within academia. (Winter 1998:1)

As *Missiology* was getting underway, *Practical Anthropology*, another scholarly journal, was

suspending publication after 19 years. *Missiology* was able to assume its list of 4,000 subscribers.

ASM currently is a 501 (c) 3 organization with three major constituent groups — conciliar, conservative evangelical, and Roman Catholic. It has a Board of Directors with nine directors and four officers. Elected by the Board, officers serve their first year as the Second Vice President, their second year as the First Vice President, and finish their tenure as the society’s President, charged with planning the program for the annual meeting in Chicago every June. The secretary-treasurer stays in the position from year to year. This rotation of leadership ensures various groups are represented in management decisions and annual meeting programs, but it does make it difficult to achieve continuity in direction from year to year.

ASM also has a 16-member Board of Publications with a Chair that serves a 4-year term. ASM’s publications — the journal, the dissertation series, and the book series — are directed by the publisher. The publisher is William Burrows, the managing editor of Orbis Books. The editor of *Missiology* is Terry Muck. Dr. Muck is a publishing scholar and professor of mission and world religion at Asbury Theological Seminary. Before coming to academia, Dr. Muck was the executive editor of *Christianity Today*. The journal has two associate editors and an administrative editor.³ The society is funded by membership dues, advertising revenue, journal subscriptions, annual meeting fees, and book sales. But *Missiology* is, by far, the leading source of Society revenue.

Today *Missiology* is recognized as the premiere journal for mission studies. Unable to sustain its original subscription base of 4,000, the journal currently has 1,259 active subscribers and is circulated in 74 countries. For demographic and categorical breakdown, see figures 1 and 2.

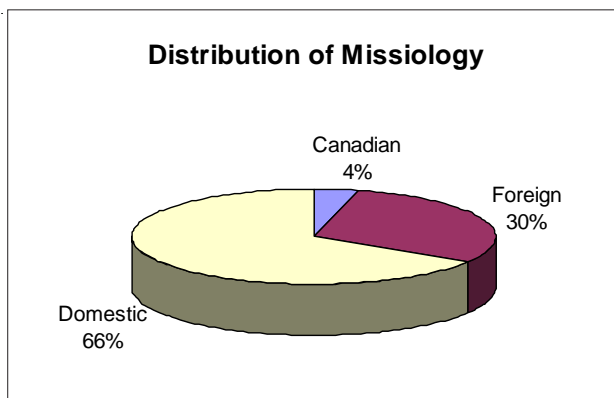


Figure 1

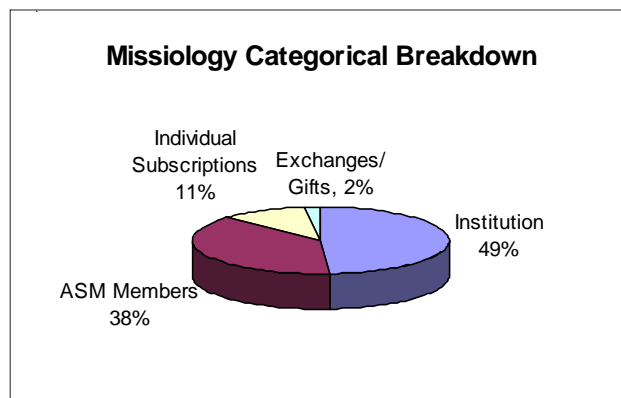


Figure 2

Missiology is currently exhibiting some positive signs of growth. Advertising revenue is up from a low of \$4,630 in 2002 to a high of \$9,008 in 2005, a 94.5% increase. The journal is being accessed on-line. Through its participation in the ATLA Serials Collection, *Missiology* received 61,134 issue hits from Sept. 1, 2004 to August 31, 2005. Manuscript submission, another way to gauge the relative health of an academic journal, is strong. From a low of 32 submissions in 2002, *Missiology* received 70 manuscripts in 2005 and is on target to receive even more in 2006.

ASM's Board of Publications recently re-engineered its editorial office expanding its in-house capacity to manage subscriptions and changed printers to reduce typesetting costs from \$45 per page to \$7.75 per page. In 2005, this move reduced expenses for the society by more than \$25,000. But in spite of the positive signs, the journal was not immune from cancellations and had a reduction in revenue of \$10,000 from the previous year.

The Business Environment

An assessment of the business environment is quite difficult to do with academic journals because they do not compete with other journals based on price, and they do not respond to the normal laws of supply and demand. Journals compete for prestige and impact as measured by citations in other research and publications. But a quick assessment of how the price of *Missiology* compares with similar journals is in order.

In an analysis of 44 journals in the field of theology, *Missiology* has the second lowest cost per page at .06 cents. Only the *Journal of the Evangelical Theological Society* has a lower price of .03 cents per page. The most expensive journal analyzed is *Modern Theology* at .76 cents per page and an annual volume cost of \$561. It is interesting to note that of the 44 journals analyzed, the seven most expensive journals are published commercially, and the seven least expensive journals are society-published. As illustrated in this data, commercial publishers raise the price of journals well above the price charged by the originating Society. The commercial publisher in our analysis will increase institutional subscriptions from the current \$40 per year to \$191 per year.

Literature Review

The literature characterizes the situation in the field of scholarly journal publication as uncertain (Cox 1998), broken (Candee N.D.), in crisis (Houghton N.D.) and even as a true market failure (Poynder 2002). The rapid development of electronic publishing, the increasing involvement of commercial publishers, and declining subscriptions have forced a shift in the publishing landscape and caused many non-profit scholarly societies to rethink their publishing model.

The Scholarly Society

Scholarly societies are formal organizations created for supporting scholarship and teaching in the fields they represent (Rudder 2003:2). While many societies further the interests of their members, scholarly groups “explicitly intend to serve wider interests, not simply those of their dues-paying members, by furthering values of teaching, peer-reviewed research, free and open scholarly exchange, and scholarship more broadly” (2003:3). Over the last four and a half decades, however, there has been a marked decline in the number of people joining membership groups in the United States (Putnam 2000). This trend can also be seen in scholarly societies. In her analysis, Rudder found that between 1994-1999, 48% of societies experienced a decline in membership, and the smaller the society, the more likely a membership decline (2003:47).

In spite of declining membership, Rudder finds that the overall health of most scholarly societies to be quite strong. Using net worth as a key indicator, every society surveyed reported an increase in the net worth from 1989 to 1999 and revenues that exceed expenses in more than 75% of the societies (2003:17). The most cited reason for joining an academic society was ‘keeping abreast of research and methodology’ (2003:22). However, the literature reveals that most members of academic societies are not deeply engaged in the work of the organization. Rudder reports fewer than 10% of members ever made a financial contribution, nominated someone for a position, published an article in the society’s journal...served as a program or committee chair, served as an officer,...or served as editor of the journal (2003:24).

The Significance of the Scholarly Journal

Ha says the biggest benefit for academic organizations of publishing a journal is to increase the organization's prestige and leadership in its field (2003:194). For a member-based learned society, the journal acts as an incentive for people to become members. This particular model, society-based publishing where a journal uses the society's membership dues as its revenue, usually enjoys a large and stable readership (Ha 2003:194).

Scholarly journals play an important role in the academy. Scientists consistently rate journals more important than other resources, and the number of articles read per year is increasing (Tenopir 2002:113). The average reading now across all fields is about 130 articles per year (2002:112). Furthermore, scholarly journals are often the first source of new information. Tenopir found that almost half of the information found in journals was new to the reader (2002:113).

Besides informing the academic community, the scholarly journal plays an important role in promotion and tenure decisions.

From the perspective of the scientific scholar, publication is usually the key credential for survival and advancement in a research university. The scholar's career is greatly affected by his rate of refereed journal publication and the quality of the work being published. (Miller and Harris 2004)

Ha found that the print journal is the most prestigious publication format for scholars (2003:195).

Cost-Effectiveness of Different Publishing Models

While the scholarly journal still enjoys strong readership and prestige, it is in crisis. Prices for library subscriptions, the heart and soul of the journal industry, are escalating at an unsustainable pace. From 1987 to 1999, the unit cost of library subscriptions to scholarly journals grew 206% (Scholars Under Siege). Journals were 30 times more expensive in 1997 than they were in 1970 (Cox 1998:163). The ever-escalating price of journals has resulted in librarians canceling more subscriptions than they renew. This issue is not uniquely American either. Australia's journal subscriptions dropped 43.7% in a recent five-year period, and according to a report issued by the Association of Research Libraries and the Association of College and Research Libraries, The University of Ottawa and the University of Alberta cut a combined 9,355 journals in the last ten years.

This trend has caused many scholarly societies to explore alternative publishing models. The Association of American Universities and the Association of Research Libraries delineate three models for the transfer of scholarly information:

1. The traditional ‘classic’ print-based model
2. The ‘modernized’ parallel publishing model
3. The ‘emergent’ model that by-passes print and uses computing and telecommunications technology exclusively to create what is referred to as knowledge management systems called ‘collaboratories’ (Cox 1998).

Many scholarly societies use the traditional print-based model. As such, society-published journals usually are the least expensive. Ha cites several reasons for the lower cost: 1) The Society absorbs many hidden overhead costs for the journal; 2) The Society can obtain volunteer service from its members; 3) The Society does not need to mark up the price to make a profit; and 4) Membership dues provide solid funding (2003:194). Budd’s study on journal subscription prices in social sciences indicates that most of the high-impact journals are society-published (Budd 2002). Odlyzko (1998) found that professional societies earn substantial profits on their publishing operations—net returns of 30% or more are not uncommon.

The rapidly changing publishing environment is causing many Societies to transition from the classic print-based model to either the parallel publishing model or to knowledge management systems. The parallel-publishing format, according to Ha: 1) gives needed prestige; 2) maximizes readership through ease of access on-line; and 3) reduces the print-run resulting in an increase in the unit cost of print production (2003:195). Maintaining an on-line version of the journal requires the Society to have additional computing facilities and highly technical staff. Since most small Societies have neither, they partner with an entity that does. Skomal wrote, “Today’s electronic environment mitigates against a small scholarly publisher continuing to operate its entire program independently. Given the complex set of working parts, partnering with vendors, consultants, funding agencies, and even other publishers increases the likelihood of success” (2005).

More often than not, the Society partners with a commercial firm. While providing the Society

with the much needed on-line access and broad market exposure, this partnership results in an increase in price and a decrease in cost-effectiveness. Henry Barschal's 1986 study found that commercial firms have high costs per character or high ratios of cost to impact. The findings were confirmed in 1998 in a study done by the University of Wisconsin, and The Cornell Study found, "the journal costs charged by commercial publishers as institutional costs are extraordinary compared to costs charged by other types of journal publishers."

The Evolution Underway

We live in a knowledge-based society and more information than ever is just a click away. This evolution is, perhaps, felt most profoundly in academia, and by extension in scholarly publishing. Houghton et. al. writes, "There is increasing demand for access to a wider range of more diverse sources; for access mechanisms that cut across disciplinary silos; and for access to, and management of, non-traditional, non-text digital objects" (2003).

This evolution means that the nature and role of scholarly journals are changing. Smith (2000) suggests the World Wide Web has replaced the journal as the primary communication medium because most of the roles traditionally played by the journal can now be done by the Internet. Undeniably, change is at hand. Acknowledging the new reality Christopher Tomlins, the senior editor of *Law and History Review*, writes:

Scholarly journals that do not begin changing now in ways that respond creatively to the online environment will no doubt still be around in ten or fifteen years. But their capacity to perform their key disseminating and authorizing functions efficiently and usefully will be significantly impaired, and their audience will by then be rapidly wasting away. They will have become a fringe technology, a curiosity. They will no longer be in a position to add value to professional discourse. (1998)

Three Different Responses

As the following three examples indicate, the changes societies implement are as varied as the societies themselves.

The Florida Entomological Society (FES)

This society was the first long-published, refereed, natural science journal to make its contents

freely available on the Internet. In November 1994 FES posted pdf files of their contents on the web. By charging the authors a fee for Immediate Free Web Access (IFWA), the Society was able to replace some of the revenue it was losing from diminishing print subscriptions. In 2001, IFWA fees generated \$10,800 in revenue. The e-version of the journal cost the Society \$2,366 leaving a net income from IFWA of \$8,434 (Walker N.D.:5).

Journal of Markets & Morality (JMM)

Started in 1998 as a print-only, interdisciplinary, peer-reviewed academic journal, JMM is published by The Acton Institute for the Study of Religion and Liberty. In 2002, it added free full-text e-versions of all current and previous content to its website. This, of course, prompted the inevitable question of, “Why should I subscribe?” In response, JMM commissioned a study in 2004 into its practices. They concluded that the ideal solution for their journal and any journal that wishes to meet the varied demands of its stakeholders is to appear in both print and electronic formats (Ballor 2005:162).

The American Anthropological Association (AAA)

With more than 100 years of experience in scholarly publishing, AAA had developed a portfolio of 20 peer-reviewed journals, seven newsletters, and four book series by the year 2000. AAA experienced a nearly 28% decline in institutional subscriptions over a 6-year period, and its membership dues suddenly leveled off after 20 years of steady increases. AAA found itself in the unenviable position of subscription/membership revenue not off-setting publication expenses. With funding from The Andrew W. Mellon Foundation, AAA partnered with the University of California Press to create a ‘virtual gateway to anthropology.’ Now, instead of books and hard-copy journals, AAA produces photos, video, audio recordings, databases, and increasingly blogs, e-mail, and Web sites (Skomal 2005:2).

Methodology

The tool used for this decision analysis is the Multi-Attribute Utility Model (MAU). I chose this tool because more than one thing is important to the decision-makers. If ASM could predicate the decision on profit alone, the choice of tools would have been quite different, perhaps a decision tree with maximizing net present value as the decision rule. The MAU model also allowed me to tailor the model specifically to the American Society of Missiology, with its unique set of characteristics and values. The MAU model involved the following steps:

1. Determine the attributes and objectives that are important to the decision and verify independence.
2. Create a scale of possible utility levels for each attribute.
3. Assess the value of each attribute and assign a corresponding utility score.
4. Estimate weights to apply to each utility score.
5. Calculate utility for each alternative using the additive model: $U = \sum_i W_i U(A_{ij})$
6. Make a recommendation based on the highest utility score.

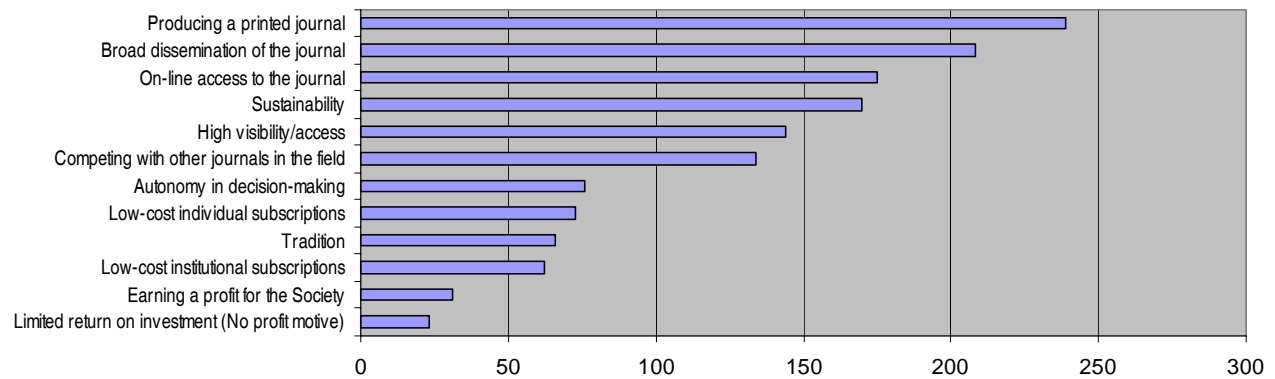
Step 1: Determine the attributes and objectives that are important to the decision.

To determine the values of the Board, I conducted an e-mail survey of the ASM Board of Publications, the publisher, the editor, associate editors, and the four officers of the Board of Directors. Within the Society, these are the decision-makers who shape the policies of the Society. ASM does have a Board of Directors but they act upon the recommendation of the Board of Publications, the editor, and the publisher. (It is interesting to note that the publisher did not respond to the survey. While being very supportive and helpful in this analysis, he did not share his opinion.) Of the 21 surveys sent, 15 responded representing a 71.4% response rate. A copy of the survey is presented in Appendix 1.

To achieve some level of uniformity for analysis, the survey provided twelve characteristics for respondents to assess. Recognizing that I could not provide an exhaustive list, I gave the respondents an opportunity to add characteristics that they value. To grasp the relative importance of each

characteristic to the other, I asked the respondents to divide 100 points between the characteristics to most closely reflect their personal values. This approach worked easily with this particular sample. Each person surveyed has a Ph.D. and was able to understand the assignment. If I was surveying a less educated sample, I would have chosen a different approach.

The responses were all vastly different reflecting the complex nature of this decision. The following chart delineates the overall response in descending order of importance.



There were some significant results of interest. Of the twelve characteristics measured, only two — on-line access and producing a printed journal — received points from each respondent. The other ten characteristics were not valued at all by at least one respondent. The two lowest average scores, earning a profit for the Society and the non-profit motive of the journal received 2.06 points and 1.53 points respectively. Ten respondents placed no value at all on earning a profit.

The respondents also placed relatively little value on maintaining low-cost institutional subscription prices (avg. value was 4.1) and low-cost individual subscription prices (avg. value was 4.86), valuing the cost of institutional subscriptions slightly less than individual subscriptions. It is interesting to note that four of the five characteristics that were given the least value were the price/profit characteristics. In seeming contradiction to the ranking of price and profit, 14 respondents placed at least some value on sustainability with an average point score of 11.33, ranking it the fourth highest valued characteristic.

Producing a printed journal received the highest average point score (15.93), with broad dissemination (13.86) and on-line access (11.66) following closely behind. The scores indicate that the respondents would be willing to sacrifice some autonomy (5.06) in order to compete with other journals

in the field (8.93). Tradition scored near the bottom of characteristics. While ten respondents assign some value to tradition, the assignments were relatively low (4.4). Figure 3 delineates survey results.

Figure 3

ASM Survey Results			
Characteristic	Average	Minimum/Maximum Amount Assigned per Person	% of Respondents Assigning Some Value
Competing with other journals in the field	8.93	0/25	60%
Low-cost individual subscriptions	4.86	0/15	73.3%
Broad dissemination of the journal	13.86	0/25	93.3%
Low-cost institutional subscriptions	4.1	0/15	66.7%
Earning a profit for the Society	2.06	0/10	33.3%
Limited return on investment (No profit motive)	1.53	0/10	26.6%
On-line access to the journal	11.66	5/20	100%
Autonomy in decision-making	5.06	0/15	53.3%
Producing a printed journal	15.93	4/25	100%
High visibility/access	9.6	0/20	86.6%
Sustainability	11.33	0/25	93.3%
Tradition	4.4	0/15	66.6%

Respondents were also asked to include characteristics of the journals that were not on the list and to assign points to those characteristics as well. However, they still could not exceed the 100 point limit. Respondents added the following characteristics and point assignments.

	# of Points
Roman Catholic-Ecumenical-Evangelical & Anthropological Missiological Niche	20
Important intellectual contribution to discipline of missiology	30
Broad spectrum of perspectives	10
Editorial sophistication	5
Excellent articles in <i>Missiology</i> (high quality)	20
Impact on mission in the real world	12
Not reducing mission to dialogue	12

These characteristics, while providing a glimpse into the values of the respondents who provided them, did not factor into the decision analysis beyond this point.

Step 2: Create a scale of possible utility levels for each attribute

In order to analyze each attribute, I developed a measurement scale. Some of the attributes, such as “producing a printed journal” needed only a simple dichotomous scale, such as yes or no. Regardless of complexity, each scale started with a zero representing no utility and 100 representing maximum utility. The scales are presented below with a brief explanation of how/why they were developed.

MAU Utility Scales		
Utility	Competing with Other Journals in the Field	
0	Electronic journal only	
30	Printed journal	
25	On-line access	
15	No moving wall	
15	Indexed	
15	Peer review	
100	Provides all competitive features	
	Low-Cost Individual Subscriptions	
0	>=\$100	
5	>=\$75 and <=\$99	
15	>\$50 and <\$74	
30	>\$25 and <\$49	
50	>\$1 and <\$24	
100	Free	
	Broad Dissemination of the Journal	
0	No dissemination	
25	Disseminated only in print	
25	Disseminated only on-line	
50	Disseminated in print and on-line	
100	Disseminated in print and on-line simultaneously	
	Low Cost Institutional Subscriptions	
0	>=\$420.76	
20	>=\$280.51 and <=\$420.75	
30	>=\$140.26 and <=\$280.50	
50	>=\$1 and <=\$140.25	
100	Free	

MAU Utility Scales		
Utility	Earning a Profit for the Society	
0	No profit	The more profit the Society makes the higher the utility. ASM recently made \$20,000 in profits which represents the highest figure the Society has ever netted after expenses. It is the highest point on the scale. The other categories are the quartiles from that point downward.
20	\$1 to \$5,000	
30	\$5,001 to \$10,000	
50	\$10,001 to \$20,000	
100	>=\$20,001	
No Profit for the Society (No Profit Motive)		
0	>=\$20,001	In this scale utility has an inverse relationship to profit. If the Society makes a profit, it indicates that the journal is priced above marginal cost. The higher the price above marginal cost, the lower the utility. If the Society doesn't make a profit, it means the price is set at marginal cost and this maximizes utility.
20	\$10,001 to \$20,000	
30	\$5,001 to \$10,000	
50	\$1 to \$5,000	
100	No profit	
On-line Access to the Journal		
0	No access	For the end-user, free electronic access to <i>Missiology</i> would maximize utility. Inversely, no access at all would give no utility. In between the two ends, password-protected access would provide varying amounts of utility based on the duration of the moving wall. The assumption is that more immediate access gives more utility.
20	Password-protected access with a 12-month moving wall	
30	Password-protected access with a 6-month moving wall	
50	Password-protected access with no moving wall	
100	Free access to all	
Autonomy in Decision-making		
0	No autonomy	Complete autonomy offers the highest amount of utility. Short of complete autonomy, there are varying levels of autonomy that provide utility. The assumption is the more elements of the journal you get to control, the higher your utility. If you have no decision-making power, you do not have any utility.
20	Editorial autonomy	
30	Editorial and advertising autonomy	
50	Editorial, advertising and production autonomy	
100	Complete autonomy	
Producing a Printed Journal		
0	No printed journal	Producing a printed journal gives maximum utility while not producing a printed journal gives no utility.
100	Printed journal	
High Visibility		
0	No visibility	The more the journal is marketed, the more visible it becomes and the higher the utility.
40	Low visibility	
60	Medium visibility	
100	High visibility	

MAU Utility Scales		
Utility		Sustainability
0	Less than one year	The publishing model is considered sustainable as long as revenues exceed expenses.
40	One to two years	
60	Three to four years	
100	Five years and more	
		Tradition
0	Breaking tradition	In this scale, maintaining tradition is utility-maximizing.
100	Maintaining tradition	

Step 3: Assess the value of and assign a corresponding utility score to each alternative.

See pages 19 and 20 for the utility assignments for each attribute and each alternative.

Step 4: Estimate weights to apply to each utility score.

To weight the scores, I took the points each person assigned to an attribute and determined the percentage of their allotted points. Using a 100-point scale simplified this task enormously. I weighted

Figure 4: Weights for Utility Scores	
Characteristic	Weight
Competing with other journals in the field	.09
Low-cost individual subscriptions	.05
Broad dissemination of the journal	.15
Low-cost institutional subscriptions	.05
Earning a profit for the Society	.02
Limited return on investment (No profit motive)	.02
On-line access to the journal	.13
Autonomy in decision-making	.05
Producing a printed journal	.17
High visibility/access	.10
Sustainability	.12
Tradition	.05
Total	1

each individual’s responses and then took the average of the group as a whole. Figure 4 shows the weights that were applied to the utility scores in the model.

Step 5: Calculate the utility for each alternative using the additive model:

$U = \sum W_i U(A_{ij})$ where $S = \text{sum}$, $W = \text{weight}$, $U = \text{utility}$, $A_{ij} = \text{attributes}$.

Alternative One: Continue to publish its quarterly journal, *Missiology: An International Review*, using its current print-only model and contracting out on-line availability to the American Theological

Library Association (ATLA). ATLA makes *Missiology* available to its subscribers via its website but must observe a 12-month moving wall.

ASM Model Rating Scales for Weighted Criteria								
Criterion	Utility Scale							
Competing with other journals in the field	Electronic journal only	Printed journal	On-line access	No moving wall	Indexed	Peer review	All features	Total
	0	30	25	15	15	15	100	
		●	●		●	●		85
Low-cost individual subscriptions	>=\$100	>=\$75 and <=\$99	>=\$50 and <=\$74	>=\$25 and <=\$49	>=\$1 and <=\$24	Free		Total
	0	5	15	30	50	100		
				●				30
Broad dissemination of the journal	No dissemination	only in print	only on-line	in print & on-line	Both simultaneously			Total
	0	25	25	50	100			
				●				50
Low-cost institutional subscriptions	>=\$420.75	>=\$280.51 and <=\$420.75	>=\$140.26 and <=\$280.50	>=\$1 and <=\$140.25	Free			Total
	0	20	30	50	100			
				●				50
Earning a profit for the Society	No profit	\$1,000 to \$5,000	\$5,001 to \$10,000	\$10,001 to \$20,000	>\$20,000			Total
	0	20	30	50	100			
				●				50
Limited return on investment (No profit motive)	>\$20,000	\$10,001 to \$20,000	\$5,001 to \$10,000	\$1,000 to \$5,000	No profit			Total
	0	20	30	50	100			
		●						20
On-line access to the journal	No access	Password/12-month delay	Password/6-month delay	Password/no delay	Free access to all			Total
	0	20	30	50	100			
		●						20
Autonomy in decision-making	No autonomy	Editorial autonomy	Editorial/adv. autonomy	Editorial/adv/prod. autonomy	Complete autonomy			Total
	0	20	30	50	100			
					●			100
Producing a printed journal	No printed journal	Printed journal						Total
	0	100						
		●						100
High visibility/access	No visibility	Low visibility	Medium visibility	High visibility				Total
	0	40	60	100				
		●						40
Sustainability	Less than one year	1 to 2 years	3 to 4 years	+ 5 years				Total
	0	40	60	100				
				●				100
Tradition	Breaking tradition	Maintaining tradition						Total
	0	100						
		●						100
Total								745

Commercial Model Rating Scales for Weighted Criteria								
Criterion	Utility Scale							
Competing with other journals in the field	Electronic journal only	Printed journal	On-line access	No moving wall	Indexed	Peer review	All features	Total
	0	30	25	15	15	15	100	
							●	100
Low-cost individual subscriptions	>=\$100	>=\$75 and <=\$99	>=\$50 and <=\$74	>=\$25 and <=\$49	>=\$1 and <=\$24	Free		Total
	0	5	15	30	50	100		
				●				30
Broad dissemination of the journal	No dissemination	only in print	only on-line	in print & on-line	Both simultaneously			Total
	0	25	25	50	100			
					●			100
Low-cost institutional subscriptions	>=\$420.75	>=\$280.51 and <=\$420.75	>=\$140.26 and <=\$280.50	>=\$1 and <=\$140.25	Free			Total
	0	20	30	50	100			
			●					30
Earning a profit for the Society	No profit	\$1,000 to \$5,000	\$5,001 to \$10,000	\$10,001 to \$20,000	>\$20,000			Total
	0	20	30	50	100			
			●					30
Limited return on investment (No profit motive)	>\$20,000	\$10,001 to \$20,000	\$5,001 to \$10,000	\$1,000 to \$5,000	No profit			Total
	0	20	30	50	100			
			●					30
On-line access to the journal	No access	Password/12-month delay	Password/6-month delay	Password/no delay	Free access to all			Total
	0	20	30	50	100			
				●				50
Autonomy in decision-making	No autonomy	Editorial autonomy	Editorial/adv. autonomy	Editorial/adv/prod. autonomy	Complete autonomy			Total
	0	20	30	50	100			
			●					30
Producing a printed journal	No printed journal	Printed journal						Total
	0	100						
		●						100
High visibility/access	No visibility	Low visibility	Medium visibility	High visibility				Total
	0	40	60	100				
				●				100
Sustainability	Less than one year	1 to 2 years	3 to 4 years	+ 5 years				Total
	0	40	60	100				
				●				100
Tradition	Breaking tradition	Maintaining tradition						Total
	0	100						
	●							0
Total								700

After assessing this alternative for each attribute in the model, I derived the following formula using the average weights.

$$\text{MAU (Alternative 1)} = \textit{Competing} (.09)(85) + \textit{Individual subscriptions} (.05)(30) + \textit{Broad dissemination} (.15)(50) + \textit{Institutional subscriptions} (.05)(30) + \textit{Profit} (.02)(50) + \textit{No profit motive} (.02)(20) + \textit{On-line access} (.13)(20) + \textit{Autonomy} (.05)(100) + \textit{Printed journal} (.17)(100) + \textit{High visibility} (.10)(40) + \textit{Sustainability} (.12)(100) + \textit{Tradition} (.05)(100) = \mathbf{66.46}$$

Alternative Two: Accept the offer of a commercial firm in the United Kingdom to manage, publish, and distribute *Missiology* in return for immediate on-line availability, increased exposure through marketing, and a guaranteed income for the Society.

$$\text{MAU (Alternative 2)} = \textit{Competing} (.09)(100) + \textit{Individual subscriptions} (.05)(30) + \textit{Broad dissemination} (.15)(100) + \textit{Institutional subscriptions} (.05)(30) + \textit{Profit} (.02)(30) + \textit{No profit motive} (.02)(30) + \textit{On-line access} (.13)(50) + \textit{Autonomy} (.05)(30) + \textit{Printed journal} (.17)(100) + \textit{High visibility} (.10)(100) + \textit{Sustainability} (.12)(100) + \textit{Tradition} (.05)(0) = \mathbf{75.52}$$

Alternative Three: Invest in the Society's capacity to offer *Missiology's* content on their own website.

This alternative was ruled out as unfeasible early in the analysis. It requires facilities and technical staff that are just not available within ASM. As a case in point, the Society increased subscription prices in June 2005. The website still does not reflect that change. ASM has a strong commitment to volunteer service from Society members. The webmaster volunteers his time and works with another volunteer from outside of the Society. Posting and maintaining electronic content of the caliber available through ATLA and/or a commercial vendor is cost-prohibitive at this time and well beyond the technical capacity available.

The Results

To analyze the results of the survey, I developed a MAU model for each individual survey respondent. To develop the individual MAU scores, I used their total point distribution to develop weights. I then developed the model by multiplying the weight with the utility value for each attribute, adding the products to determine a utility score for both alternatives. See figure 5.

Attributes	Respondent Weights	Commercial Utility Pts.	Commercial MAU	ASM Utility Pts	ASM MAU
Competing with other journals in the field	0.00	100	0.00	85	0.00
Low-cost individual subscriptions	0.10	30	3.00	30	3.00
Broad dissemination of the journal	0.20	100	20.00	50	10.00
Low-cost institutional subscriptions	0.05	30	1.50	50	2.50
Earning a profit for the Society	0.10	30	3.00	50	5.00
Limited return on investment (No profit motive)	0.00	30	0.00	20	0.00
On-line access to the journal	0.15	50	7.50	20	3.00
Autonomy in decision-making	0.00	30	0.00	100	0.00
Producing a printed journal	0.15	100	15.00	100	15.00
High visibility/access	0.00	100	0.00	40	0.00
Sustainability	0.20	100	20.00	100	20.00
Tradition	0.05	0	0.00	100	5.00
Total	1	700	70.00	745	63.50

Figure 5 — This chart displays how the individual MAU model score was developed. The weights in this example were from one survey respondent. According to this respondent’s value, the commercial model provides more utility.

One respondent’s score for alternative one (ASM published journal) was higher than Alternative Two, but only by .31 of a point. One individual’s scores for each alternative were identical so he/she is indifferent. The other thirteen respondents’ scores all favored Alternative Two — the commercial publisher option. The average utility score was 10.48 points higher for Alternative Two, with a median of 6.5 and a range of 34.

To determine how the Board felt as a whole, I took the average of all of the individual weights together. The MAU Model for the Board of Publications is delineated below.

Attributes	Respondent Weights	Commercial Utility Pts.	Commercial MAU	ASM Utility Pts	ASM MAU
Competing with other journals in the field	0.09	100	9.00	85	7.65
Low-cost individual subscriptions	0.05	30	1.50	30	1.50
Broad dissemination of the journal	0.15	100	15.0	50	7.50
Low-cost institutional subscriptions	0.05	30	1.50	50	2.50
Earning a profit for the Society	0.02	30	0.60	50	1.00
Limited return on investment (No profit motive)	0.02	30	0.60	20	0.40
On-line access to the journal	0.13	50	6.50	20	2.60
Autonomy in decision-making	0.05	30	1.50	100	5.00
Producing a printed journal	0.17	100	17.0	100	17.00
High visibility/access	0.10	100	10.0	40	4.00
Sustainability	0.12	100	12.0	100	12.00
Tradition	0.05	0	0.00	100	5.00
Total	1	700	75.20	745	66.15

I also developed the MAU Model for those people involved more actively involved in the publication of the Journal and the Society's business. Again, the results favored Alternative Two. In fact, the scores varied by less than one point for each alternative.

Alternative One (ASM): 65.94

Alternative Two (Commercial publisher): 75.53

With the exception of two individuals, Alternative Two was the maximum utility alternative.

The Trade-Off

The MAU Model clearly indicates that the American Society of Missiology should choose the commercial publisher option. It offers a higher utility value in the areas the Board values most, on-line access and broad dissemination. Both models offer the same utility for the printed journal and sustainability so those two factors didn't impact the outcome. On the other hand, if the Board had valued tradition as highly as it valued on-line access, the recommendation from the MAU model would have been different. This model was decided on on-line access and dissemination.

But is there a trade-off? Can we abide by the decision produced by the MAU Model without fully analyzing the financial data? When does the economic reality of the decision and its outcome trump values? If the Board were going to make the decision based on profit, would it be the same decision? A brief analysis of forecasted revenue for both models provides an answer.

A Scenario Analysis

I conducted a scenario analysis of ASM's finances. In 2005, the Society had the healthiest year in recent financial history, maybe ever. Revenue exceeded expenses by \$20,000. A major restructuring of the editorial office can be credited with the positive outcome. The Society had lost money every year from 2000-2004 so serious changes had to be made. Fortunately, it worked and the Society is back on track. But at the current revenue growth trend of 1.2% and the 18.56% average annual increase in expenses, the Society's revenues will soon be insufficient to meet expenses. Figure 6 illustrates revenue and expenses if they continue to trend as they have in the last five years. In 2008, the Society is expected to have a negative cash flow.

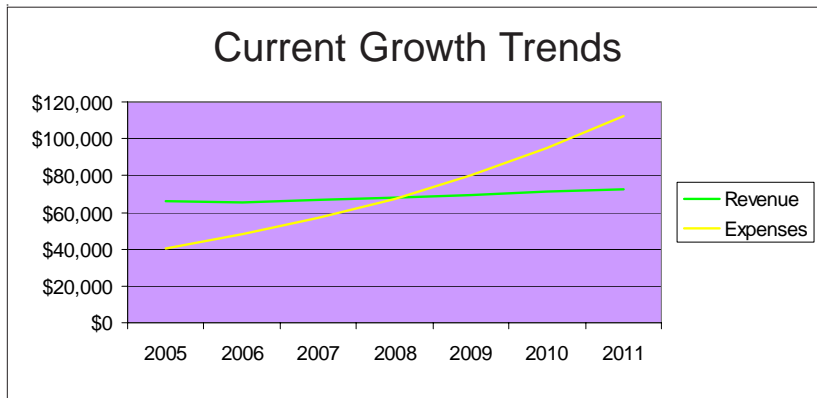


Figure 6 — With current revenue growth (1.2%) and expense growth (18.56%) trends, ASM’s current publishing model will not be sustainable beyond 2008.

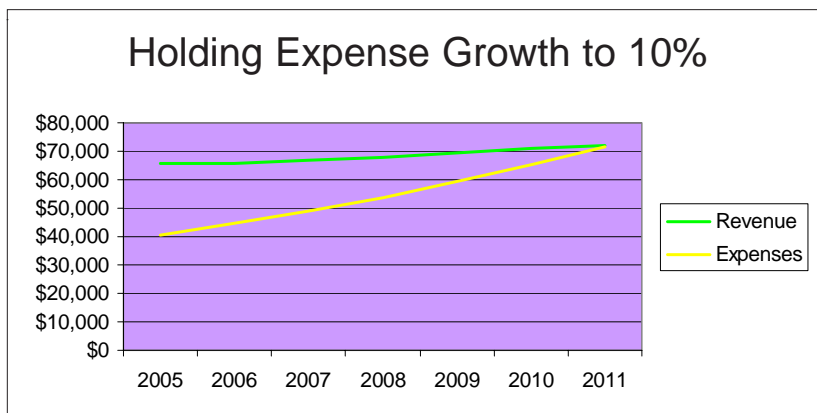


Figure 7 — If ASM can reduce and hold expense growth to 10%, the Society can expect to be sustainable until 2011 given its current revenue growth.

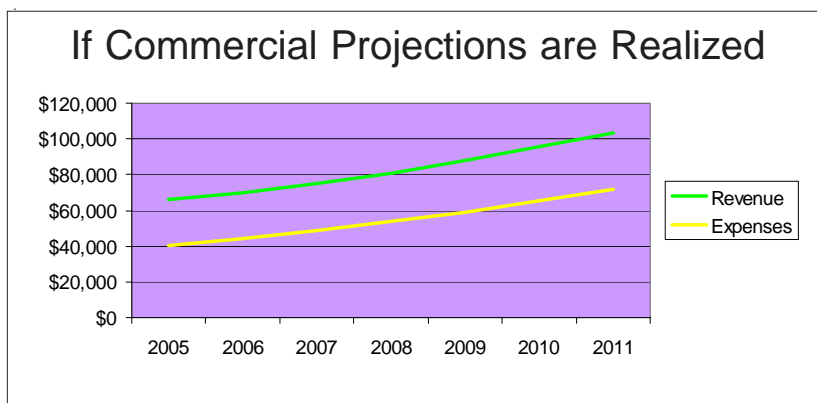


Figure 8 — The commercial publisher anticipates a 9.6% annual growth in subscriptions. If ASM experiences that growth under its current publishing model, it can be sustainable for five years and beyond.

If the Society can reduce the growth of expenses to 10% per year, the Society can expect to be profitable until 2011 given their current revenue growth trend. See figure 7 for this illustration.

The commercial publisher anticipates an average 9.6% growth in revenue over the next five years. If ASM stays with its current publishing model and experiences that projected growth, it can stay viable for many more years. This is illustrated in figure 8. However, without solid reasoning for such a positive growth projection, it is safer to assume the current growth patterns will continue. The Society has more control over expenses than growth. With that said, however, ASM did experience a 5% increase in paper cost and a 5.4% increase in postage in 2005, so some elements are certainly outside of their control.

The commercial publisher has projected the following revenue for ASM. They will charge ASM \$16 per volume (4 issues) for each member. They will freeze this figure for the duration of the initial five-year contract. They will pay to ASM a 15% royalty for each institutional and individual subscriber. In addition, they will pay a \$1,500 stipend to help fray the cost of the editorial office. They project ASM’s net income to be the following:

2007	2008	2009	2010	2011	Total
\$7,812	\$8,765	\$9,699	\$10,689	\$11,739	\$48,704

Assumes an average 9.6% increase each year.

How does this outlook compare to ASM’s current outlook? A side-by-side comparison of projected profits (see figure 9) reveals more stability in the commercial publishing model.

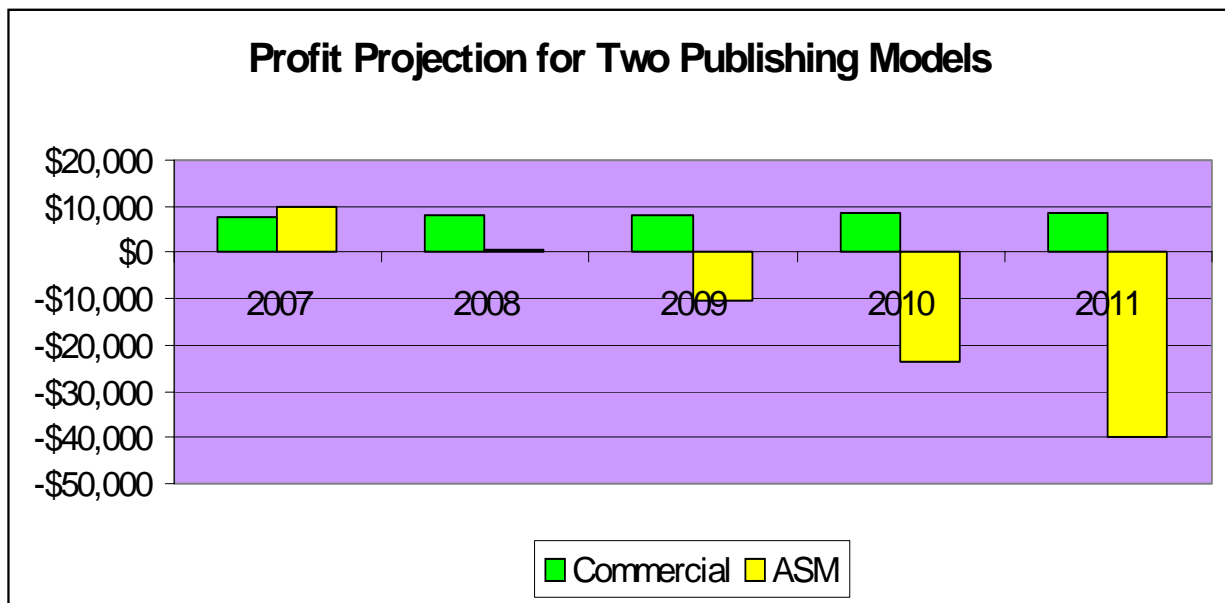


Figure 9 — With a 1.2% annual growth in revenue, the commercial publisher option indicates greater stability. This forecast contains several key assumptions. First, for ASM it assumes the 18.56% growth trend in expenses will continue. In addition, this forecast holds the commercial publisher’s expenses constant, as per their agreement.

If the Society holds expenses to a 10% annual increase, the forecast changes substantially. (see figure 10). With this forecast, ASM’s current publishing model is sustainable until 2011 and earns \$6,637 more in cumulative profits that the commercial publisher option.

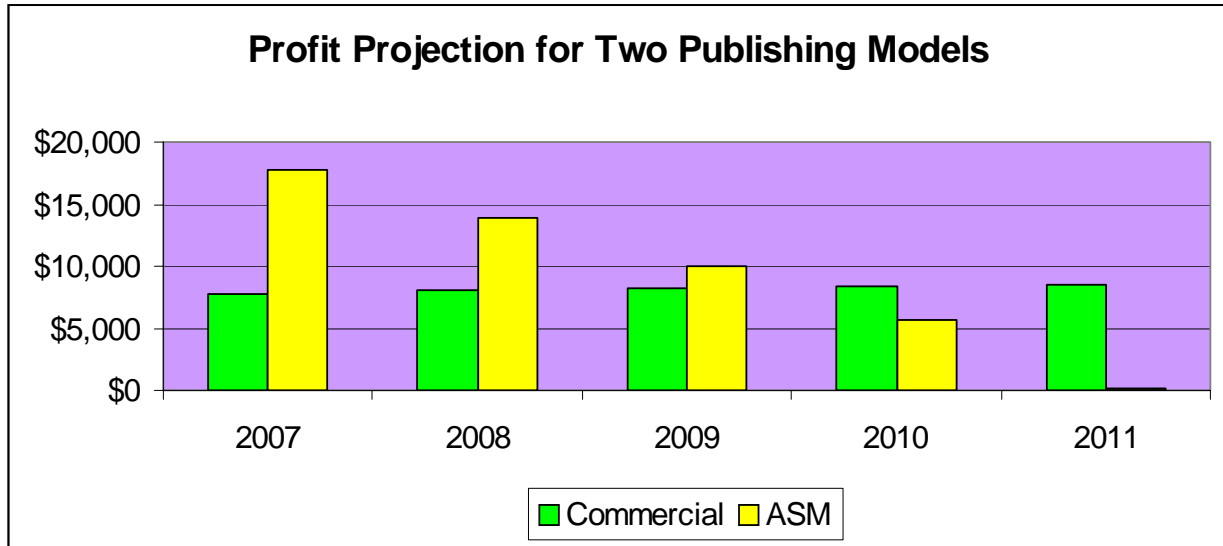


Figure 10 — With a 1.2% annual growth in revenue and expense growth held to 10%, ASM's current publishing model is sustainable through 2011 and earns \$6,637 more in cumulative profits.

Recommendation

Given the stated values of the Board of Publications and the shrinking revenue base, I recommend the American Society of Missiology partner with a commercial publisher in order to offer immediate on-line access and broad dissemination of *Missiology: An International Review*.

Study Weaknesses

The Multi-Attribute Utility (MAU) Model is a mathematical tool that allows decision-makers to compare and evaluate choices based on the attributes that matter the most. It reduces complex decisions to quantifiable numbers allowing decision-makers to compare alternatives based on utility. When MAU models are used to inform group decision making, a face-to-face meeting is generally convened for model development. The group comes to a consensus on what attributes should be placed in the model and how important the attributes are compared to the other attributes. In this study, however, the attributes were in the survey and the decision-makers were asked to rate the given attributes. They were allowed to add and weight attributes that were not in the list, and some respondents did. But since all respondents weren't given the opportunity to weight the new attributes, they could not be included in the model. To improve the study design, I could have sent a revised survey which included the new attributes and asked the respondents if they wanted to reweight their responses in light of the new attributes.

By providing twelve attributes for the respondents, it is possible that I shaped the discussion in a manner not intended. I decided the risk of biasing the discussion was acceptable because the study needed to have uniform attributes for the MAU model to function properly. The validity of the survey instrument has not validated. The attributes' independence was not established before the start of the project. If the attributes were not completely independent, I could have used a multiplicative MAU model as a corrective. It is possible that terms such as “tradition” had different connotations to different people. It is also possible that there was some confusion among respondents between “Earning a Profit for the Society” and “Sustainability.” Had time permitted, a face-to-face discussion with the Board of Publications would have been a better approach to ensure consistent understanding.

Finally, the projected revenue and expenses for the Society are based on moving averages. While a valid forecasting tool, it means the numbers were moving towards an average and might not be accurate. The financial scenario analysis is based on the projections so the same weakness might be present. Also, it is difficult to predict with any certainty what future revenues will be. As a result, the projections and scenarios are guesses— data-driven guesses, but still guesses.

End Notes

1. There are obviously many more than three alternatives. But for the sake of this brief analysis, I have selected three possible alternatives.
2. A moving wall is the number of months or years that must pass before the content is made available. ATLA subscribers can only access issues of *Missiology* that were published at least 12 months ago.
3. This writer has been the part-time administrative editor of *Missiology:An International Review* for three years.

Bibliography

Association of Research Libraries

N.D. "The Impact of Publishers Mergers on Journal Prices: An Update." *ARL Bimonthly Report* 207.

Ballor, Jordan J.

2005 "Scholarship at the Crossroads: The Journal of Markets & Morality Case Study." *Journal of Scholarly Publishing* April.

Bot, Marjolein, Johan Burgemeester, and Hans Roes

1998 "The Cost of Publishing an Electronic Journal." *D-Lib Magazine* November.

Budd, J.

2002 "Serial prices and subscriptions in the social sciences." *Journal of Scholarly Publishing* 33(1):90-101.

Candee, Catherine

2004 "Fat Cat Publishers Breaking the System." www.campus-technology.com/print.asp?ID=9357 Accessed 1/22/2006.

Cox, John E.

1998 "The Changing Economic Model of Scholarly Publishing: Uncertainty, Complexity, and Multimedia Serials." *Library Acquisitions: Practice & Theory* 22(2):161-166.

Ha, Louisa

2003 "The Economics of Scholarly Journals: A Case Study on a Society-published Journal." *Learned Publishing* 16(3):193-199.

Holberg, Jennifer L. and Marcy Taylor

2004 "Editors' Introduction: Getting the Profession We Want, or a Few Thoughts on the Crisis in Scholarly Publishing." *Pedagogy: Critical Approaches to Teaching Literature, Language, Composition, and Culture* 4(1):1-7.

Houghton, John

N.D. "The Crisis in Scholarly Communication: An Economic Analysis." Melbourne: Victoria University.

N.D. "Scholarly Communication in a Knowledge-Based Economy." Melbourne: Victoria University.

King, Donald W. and Carol Tenopir

1998 "Economic Cost Models of Scientific Scholarly Journals." Paper presented to the ICSU Press Workshop, Keble College, Oxford, UK, 31 March to 2 April 1998.

Miller, Cass T. and Julianna C. Harris

2004 "Scholarly Journal Publication: Conflicting Agendas for Scholars, Publishers, and Institutions." *Journal of Scholarly Publishing* January 2004:73-91.

Odlyzko, Andrew

1998 "The Economics of Electronic Journals." *The Journal of Electronic Publishing* 4(1).

Poynder, Richard

2002 "A True Market Failure." *Information Today* 19(11).

Rowland, Fytton

2000 "Who Will Buy My Bells and Whistles? The True needs of Users of Electronic Journals." *Serials* 13(2):73-77.

Rudder, Catherine E.

2003 "Scholarly Societies and Their members: Incentives, Motives, and Policy Implications." Paper presented at the Midwest Political Science Association, Chicago, IL, April 3-6.

Scholars Under Seige

N.D. <http://createchange.org/faculty/issues/silent.html>. Accessed June 14, 2005.

Shalala, Donna

2004 "The Buck Starts Here" Managing Large Organizations with Honesty and Integrity." Fourth Annual Elliot Richardson Lecture at the National Conference of the American Society for Public Administration, Portland, Oregon. March 28th.

Skomal, Susan

2005 "Transformation of a Scholarly Society Publishing Program." *ARL Bimonthly Report* 242 October.

Tenopir, Carol

2002 "Electronic or Print: Are Scholarly Journals Still Important?" *Serials* 15(2):111-115.

Tomlins, Christopher L.

1998 "The Wave of the Present: The Printed Scholarly Journal on the Edge of the Internet." *Journal of Scholarly Publishing* 29(3):##.

Walker, Thomas J.

N.D. "Two Societies Show How to Profit by Providing Free Access." <http://cssrvr.entnem.ufl.edu/~walker/epub/ALPSPmsDS2.pdf> Accessed February 25, 2006.

Winter, Ralph D.

1998 "ASM 25th Anniversary." Lecture presented at Evangelical Missiological Society, June 20th.

Appendix 1

**Decision Analysis: Which Publishing Model Benefits
the American Society of Missiology?**

When you think of *Missiology: An International Review*, what do you value the most?

I've listed a number of characteristics (existing and possible) that you might value, but this list is not exhaustive. Please add any characteristics that you value that are not included. To help us understand the complexity and intensity of your feelings, we ask that you assign points to those characteristics you most value. You have 100 points to assign, and we ask that you divide your points to most closely reflect your personal values.

Characteristics	Points
Competing with other journals in the field	
Low-cost individual subscriptions	
Broad dissemination of the journal	
Low-cost institutional subscriptions	
Earning a profit for the Society	
Limited return on investment (No profit motive)	
On-line access to the journal	
Autonomy in decision-making	
Producing a printed journal	
High visibility/access	
Sustainability	
Tradition	
Total Points =	100

In addition, we invite you to share any thoughts you have about *Missiology's* goals and how those goals can best be met:

If you have questions, please contact Betsy Northrup at betsy_northrup@asburyseminary.edu.
Thank you for taking the time to answer this survey.