

To the Editors,

I RECEIVED A COPY of the December 2016 Special Edition of the *Journal of Lutheran Mission* (JLM) and read with curiosity that the major reason for decline in our church body had been discovered and policy decisions to address the decline would come from this research. As an infant-baptized LCMS Lutheran and as an epidemiologist who studies and analyzes patterns, causes, and effects of health and disease conditions in populations, I care deeply about health and wellness, especially in the LCMS population. After all, what better “health outcome” than salvation is there?

However, as I read the articles, my curiosity turned to concern. I noticed these significant fallacies in the journal and expand them in the following document.

1. The inability of the study design(s) to infer causal relationship, but assumption of causality evident throughout the articles in the journal;
2. An enhanced meaning of the results given to the outcomes of the analysis methods chosen;
3. An inadequate set of variables included in the analysis;
4. A causal pathway model that is in error.

In short, the research evidence presented in the 2016 Special Edition of the *Journal of Lutheran Mission* does not support the conclusions with the degree of certainty that the authors and the editors have inferred. The research does present some interesting correlations, includes some large data sets, includes a limited literature review, and can be a starting place for more rigorous study if this topic continues to be an area of interest.

Using scientific, evidence-based approaches is helpful in determining policy,<sup>1</sup> However, the Synod should be cautioned in promoting pronatal policies based on these studies as premature and not well supported by the scientific body of evidence.

*In His Service,*

Rebeka Cook, Epidemiologist

<sup>1</sup> Julie A. Jacobs, Ellen Jones, Barbara A. Gabella, Bonnie Spring, and Ross C. Brownson, “Tools for Implementing an Evidence-Based Approach in Public Health Practice,” accessed February 6, 2017, [https://www.cdc.gov/pcd/issues/2012/11\\_0324.htm](https://www.cdc.gov/pcd/issues/2012/11_0324.htm).

## LIMITS OF INTERPRETATION IN THE JOURNAL OF LUTHERAN MISSION DECEMBER 2016 EDITION

**Study design cannot determine causation; causation assumed.**

In the first article, “A District-Level Examination of Demographic Trends and Membership Trends within LCMS Districts” George Hawley utilized an observational study design, specifically an ecological study design. In the social sciences, an ecological study is considered appropriate for the initial investigation of a causal hypothesis. This type of study can measure correlation, a statistical measure that indicates the extent to which two or more variables fluctuate together. It is not able to determine causation, the name given when one event is the result of the occurrence of the other event.

The correlations seen in the data are not spurious or random. However, even if there is a statistically significant correlation, causation cannot be inferred by this study design. In this first article, the author does not infer causation, but the subsequent article by the same author does; he does so repeatedly and uses anxiety-heightening sentences like, “Failing to halt or even reverse this trend [of the lack of early marriages and larger families] would be disastrous for the LCMS.”<sup>2</sup> By the conclusion, he has moved to a full embrace of causality: “The chief cause of numerical decline has been declining birthrate.”<sup>3</sup> The writings in the rest of the 2016 December Special Edition continue in line with this assumption that the falling birthrate is the chief/most important cause of the decline in the number of adherents in the LCMS. An ecological study design does not have the ability to determine causation. In addition, the body of evidence around the topic in the rest of the journal is insufficient to infer causation.

My objective in sharing this is not to discredit this early evidence — there is a moderate to low correlation between some birthrates and the percentage of LCMS

<sup>2</sup> George Hawley, “The LCMS in the Face of Demographic and Social Change: A Social Science Perspective,” *Journal of Lutheran Mission* 3, no. 3 (2016): 7.

<sup>3</sup> *Ibid.*, 107.

decline — but to emphasize the limitation of this study design and to advocate for greater caution in crediting the “cause of decline” in the LCMS as being birthrate based on the body of evidence in this journal.

### Enhanced meaning given to outcomes

The meanings given to the outcomes of the studies contained in this journal are enhanced to a point of inaccuracy and are overstatements of (1) statistical test capability, (2) the strength of the effects of statistical tests, (3) the breadth of topics included in the studies, and (4) the ability to narrow causality to a single variable.

First, the statistical test chosen to analyze the data is a Pearson’s R. A Pearson’s R cannot speak into causal relationships; it measures strength and direction of a relationship. Repeatedly, results have been described with this type of language, “Learn the key factor behind the decline in LCMS membership”<sup>4</sup> and “Several demographic reports explain the major reason behind patterns in decline.”<sup>5</sup> In the second article, the author uses the phrase, “This paper examines one of the most important causes of the LCMS decline: low fertility among its adherents.” Section 3 of the final journal article states, “One factor has overpowered all other factors in the synod’s numerical decline: A plummeting birth rate ...” These statements are prolific in the journal and assume strong causation, but this language is a misrepresentation of the capability of this statistic. The author mentions this limitation in the first article, “however, his subsequent language, the language used to promote the journal, and the direct statement in Section 3 indicates a failure to remember this limitation.

Second, assuming birthrate is causative of decline, the correlation is still not statistically strong enough to drive life-altering policy. Of the limited variables included in this study, the highest correlation — “White [non-Hispanic] Birthrate” — exhibits barely a moderate correlation ( $r = 0.5$ ); there are two implications to this correlation and its use. The confidence implied by the language used in this journal article as it attributes the decline of LCMS membership with birthrate, including white birthrate, on the rate of LCMS decline is an overstatement. The

correlation relationship is not strong; a Pearson’s R with a value of 0.5 is the lowest limit of a moderate correlation, and an  $r = 0.49$  would be considered weak correlation. Subsequently, in interpreting this data and concluding that “The LCMS needs to increase the birthrate” in statistical language reads, “The LCMS needs to increase the white, non-Hispanic birthrate,” a rather ethnocentric statement. Broadening the vocabulary to include “Total Birthrate” or even the “White [non-Hispanic] Married Birthrate” results in relying on data with weak correlation; consequently, the rationale for considering policies based on the strength of these correlations disappears. Promoting only birthrate as a means to increase family size instead of adoption or embryo adoption, added with the inaccurate interpretation of the regression analysis<sup>7</sup> declaring the LCMS “remains the church of a particular ethnic group,”<sup>8</sup> support the idea that “non-Hispanic white births” are the births that the LCMS is promoting. I recommend extreme caution, prudence, and care in the language used in promoting “birthrate.” In summary, the correlations<sup>9</sup> between birthrates and decline are not strong, and the association described is a specific relationship between non-Hispanic white birthrate and LCMS decline.

Third, the list of variables included in this analysis is limited to demographic and family formation variables. A way to read the question asked in the study is this, “What is the individual linear relationship between LCMS membership change and (1) white birthrate, (2) white marriage rate, (3) total birthrate, (4) total birthrate, (5) total marriage rate 6 percent white (in a district), (7) white married birthrate, (8) total population change, and (9) median age?” Those are the only variables included in the analysis. Therefore, statements that promote birthrate as the “most important cause” of the decline of the LCMS are in error by being too broad; “white birthrate” is the “most important”<sup>10</sup> of those nine variables, not considering the confounding effect of other variables. A correct statistical reading would be, “Of the nine variables independently considered, the white non-Hispanic birthrate had the

<sup>4</sup> The Lutheran Church—Missouri Synod News and Information website, accessed January 31, 2017, <https://blogs.lcms.org/2016/journal-of-lutheran-mission-december-2016>.

<sup>5</sup> Email communication received from LCMS Communications infocenter@lcms.org received January 31, 2017.

<sup>6</sup> George Hawley, “A District Level Examination of Demographic Trends and Membership Trends within LCMS Districts,” *Journal of Lutheran Mission*, 3, no. 3 (2016): 2.

<sup>7</sup> Hawley, “Demographic and Social Change,” 71. A correct reading of this regression would be, “For each additional percent increase of German ethnicity in a county, there’s an additional 0.14 percentage points of LCMS adherents in that county.”

<sup>8</sup> Hawley, “Demographic and Social Change,” 46. Again there is a correlation, causation cannot be assumed, and is a statistically inaccurate step.

<sup>9</sup> These are correlations, not causal relationships.

<sup>10</sup> “Most important” correlation, not “most important” cause.

strongest linear correlation with the change in percentage of the LCMS population” In statistical layman’s terms, “Of the nine constructs considered, one at a time, white birthrate increases and decreased most similarly to LCMS membership.” Note that other variables are explored in the journal, but these are done in the method of a literature review and sometimes include minor statistical testing; note, too, that the literature review is quite limited in variables considered. While the data set is large and the work done in analysis long, the data set and the resulting statistical tests used are not robust enough tools to infer more from the data.

Finally, a Pearson’s R can only consider the effect of a single variable and cannot separate the effect of a variable whose presence affects the other variables being studied. The consequence is a test result that may not reflect the actual relationship between the variable under investigation and the outcome; this is called confounding. A Pearson’s R cannot control for confounding and the effect of the relationship between LCMS decline and a decrease in birthrate might be explained away by controlling for the marriage rate or even by variables not included in the analysis (e.g., an increase in education in women<sup>11</sup> or an increase in women in the workplace,<sup>12</sup> both variables that are independently correlated with a decrease in birthrates in general). Acting to implement pronatal policies when a causal relationship has not been established is premature.

### Inadequate set of variables included in the analysis

There is an inadequate set of variables included in the analysis presented but conclusions about overall effect are assumed.<sup>13</sup> Variables to include in a population growth study would fit under two broad headings: migration — those who leave the LCMS — and immigration — those who join the LCMS, including those who are baptized as infants.<sup>14</sup> A study objectively seeking to discern the “major cause” of growth or decline would include variables from both migration and immigration. Variables in the first two articles in the journal are restricted to “immigration” and most specifically to “natural increase.” The third

<sup>11</sup> Ibid., 17.

<sup>12</sup> Ibid., 16.

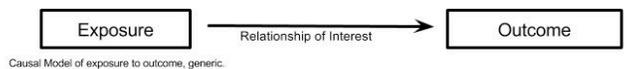
<sup>13</sup> Ryan MacPherson, “Generational Generosity: Handing Down Our faith to Our Children and Our Children’s Children,” *Journal of Lutheran Mission*, 3, no. 3 (2017): 107.

<sup>14</sup> I disagree with the term “natural increase” as it pertains to this population and explain why in the section called “A Faulty Causal Pathway;” therefore, I include “natural increase” in with immigration.

section, “Generational Generosity,” explores in a literature-review style evangelism (compared only to Southern Baptists), rural trends, conservative values, availability of youth programs, presence of early childhood centers, Hispanic outreach, and pastor affordability. The variables included in the journal are all a starting place to explore decline and provide thought-provoking correlations, but the list is incomplete, and the causation and strength of any one factor cannot be determined by the methods used. In summary, the scientific process to narrow significant variables for inclusion seems to have been omitted.

### A faulty causal pathway

A causal pathway is the process by which an outcome is brought into being. There is an exposure, and there is an outcome. In the case of faith, a person is “exposed” to [God’s] word and/or sacrament, and the Holy Spirit promises to work through these means to produce faith (outcome).



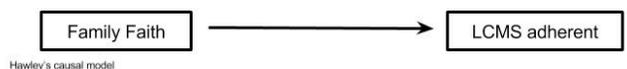
Causal Model of exposure to outcome, generic.

A picture of that relationship looks like this:



Causal Model of Faith

Faith is difficult to quantify, and a proxy measure is often used; it could be said that Hawley uses “LCMS adherents” as the proxy for faith. A visual representation of the causal model Hawley puts forward is:



Hawley's causal model

While it can be said that family faith is a proxy for the work of the Holy Spirit in the way that LCMS adherent is a proxy for faith, the text does not agree with either. Hawley compared membership in an LCMS church to citizenship in a country; he says, “LCMS affiliation remains largely a characteristic that one inherits at birth.”<sup>15</sup> Faith does not come from birth, even birth into a family of believers. The term Hawley uses for children whose parents are LCMS members and then become LCMS adherents is “natural growth.” This assumption is in error. Faith in an individual comes through the Holy Spirit working through his word and sacrament to bring a person to faith.<sup>16</sup>

<sup>15</sup> Hawley, “Demographic and Social Change,” 48.

<sup>16</sup> Third article of the Apostle’s Creed, Luther’s Small Catechism.

In a family where faith is present, an individual will be exposed to word and sacrament more often than if they are not in a family of faith; they will see discipleship modeled, they will be disciplined, they will likely have heard the message of Jesus from a trusted person. In these ways, their exposure to their family of origin, changes the likelihood a person will develop faith. In epidemiology, we would refer to this type of variable as a “risk factor.” A risk factor is any attribute, characteristic, or exposure of an individual that changes the likelihood of developing an outcome. The risk factor cannot cause the outcome alone; family faith cannot cause individual faith, but it can increase or decrease the probability of it occurring. This specific type of confounding effect is called a moderating variable. The outcomes are different for those who are raised in a family of faith and those who are not. However, family faith is not in the causal pathway of faith formation.



The implications of this model are profound. Utilizing Hawley’s causal pathway model misses the purpose of the church; it focuses on an institution rather than the body of Christ, discipleship, or faith formation.

As I read the Journal of *Lutheran Mission*, this sentence seemed to capture the main idea being communicated: “[These issues] are important paths for a religious denomination to ensure a stable population.”<sup>17</sup> This purpose is echoed in statements like “Keep young people involved in religion,”<sup>18</sup> “It is in the church’s best interest to encourage early marriage and large strong families,”<sup>19</sup> “A religious pronatalist message can only be effectively transmitted if religious institutions have the means of promoting compliance,”<sup>20</sup> “Religious organizations are competing with one another for pieces of a shrinking pie.”<sup>21</sup>

The language of this journal is LCMS *adherents*. The language throughout the journal is about religion, institutions, and power rather than faith formation, followers of Jesus, the body of Christ, restoration of a broken world,

grace, forgiveness, or the family of God. In the entire text of the journal, the name of Jesus is mentioned once, while “LCMS” is mentioned close to 900 times, “adherents” is used over 200 times, and “birthrate” and “births” over 200 times together. The causal model Hawley operates from “ensures that the church will have a new generation of adherents.”<sup>22</sup> It may preserve a cultural remnant, but it does not demonstrate a focus on the kingdom of God or the purpose our Lord and Savior has for his people as recorded in Scripture.

<sup>17</sup> Ibid., 10.

<sup>18</sup> Ibid., 10.

<sup>19</sup> Ibid., 11.

<sup>20</sup> Ibid., 21.

<sup>21</sup> MacPherson, 90.

<sup>22</sup> Hawley, “Demographic and Social Change,” 10.

## Responses

Dear Editors,

I AM GRATEFUL TO REBEKA COOK for bringing up a number of good points in her recent letter. The conversation about family and the future of the LCMS is important, and I hope it includes many voices. In the pages ahead, I want to clarify a couple of points, defend my conclusions, and acknowledge certain weaknesses in my analysis that should be addressed.

In the pages ahead, I will only address those critiques aimed directly at my own work. I leave it to the editors and Dr. MacPherson to respond to other points.

Mrs. Cook makes an excellent point about causality, and a great deal of caution must be exercised when attempting to draw conclusions from data such as these. It is true that correlation coefficients tell us nothing about a particular causal relationship. Although an invaluable tool in the social sciences, high and moderate correlation coefficients should just be a starting point, to be followed by more sophisticated methods that can better discern causality.

The point about ecological inference is similarly important.<sup>1</sup> Using census data (that includes everyone, not just LCMS members) to draw inferences about behavior within the LCMS was a crude measure, which is why I was surprised to see that the correlation was as strong as it was. It would have been better to have detailed data on birthrates and family formation within each LCMS district that was limited to the LCMS itself rather than the best proxy available.

This leads to a broader point. I absolutely agree that more work should be done to better discern the causal relationships at work. In an ideal world, it would be terrific to have longitudinal data from individual congregations, including information on infant baptisms, confirmations, deaths, and adult gains and losses. District-level data provide a useful starting point, but the small number of districts (and the concomitant limited degrees of freedom) precludes more sophisticated statistical analyses. As data collection improves, it will be helpful if the LCMS at some future date is able to conduct a large-N, multi-level analysis that will help the denomination better discern the determinants of growth and decline, using variables at both the congregation

<sup>1</sup> W. S. Robinson, "Ecological Correlations and the Behavior of Individuals," *American Sociological Review* 15 (1950): 351–57.

level and at the broader community level. I hope that the LCMS will continue to examine these questions and additionally hope that experts like Mrs. Cook will provide their insights for future projects.

However, despite acknowledging the various limitations in my report, they must be viewed in context. There is already compelling evidence from the existing social science literature demonstrating that family formation patterns are strongly related to a denomination's health. Some of these I mentioned in my report, but there are other examples worthy of our attention.

In what I consider the most important article on this subject, Hout, Greeley, and Wilde examined General Social Survey (GSS) data over time to discern the reason why "conservative" Protestant denominations were growing at the expense of more "liberal" mainline denominations in the latter half of the 20th century. They found that other potential explanations, such as conversion and different rates of apostasy, had little empirical support. However, the earlier average family formation and higher fertility rates of conservative Protestants accounted for a remarkable 76 percent of the trend. They ultimately concluded: "The changing shape of U.S. Protestantism reflects the interaction of differential demography and strong socialization. There are more conservatives today because their parents had larger families than did Episcopalian, Presbyterian, Methodist, Lutheran, and Congregationalist parents."<sup>2</sup> In other words, denominations with more large families grew, and those where small families were the norm declined. Wuthnow has similarly provided compelling evidence that declining rates of family formation account for the decline in religious observance.<sup>3</sup>

This leads to another important point that I fear was not made sufficiently clear in the earlier report. Yes, the best way to make a Lutheran is to baptize infants as Lutheran, raise those children in the church, and hope they choose to become confirmed members. However, we should not forget the other reason family and faith are connected. There is also strong evidence that forming a traditional family at an early age is one of the best ways to ensure that a person remains connected with his or her church.

<sup>2</sup> Michael Hout, Andrew Greeley, and Melissa J. Wilde, "The Demographic Imperative in Religious Change in the United States," *The American Journal of Sociology* 107 (2001): 497.

<sup>3</sup> Robert Wuthnow, *After the Baby Boomers: How Twenty- and Thirty-Somethings are Shaping the Future of American Religion* (Princeton: Princeton University Press, 2007), 55.

In the aforementioned book, Wuthnow showed that married young Americans remain very likely to be involved in religious congregations. In fact, the likelihood that young married Americans will attend religious services has not changed since the 1970s. Unfortunately for religious denominations, unmarried Americans are both becoming less likely to attend worship services, and they are growing as a percentage of the population. Unmarried young men are particularly unlikely to attend worship services.

A number of explanations for these findings have been offered. Thornton, Axinn, and Hill suggested several possible reasons marriage tends to strengthen religious commitments compared to other domestic arrangements, such as cohabitation.<sup>4</sup> Cohabiting couples may — correctly or not — feel judged by their religious communities and thus be more likely to withdraw from their churches. Married couples are also much more likely to have children, and the desire to raise children in a religious environment is often a catalyst for adults to return to church. Stolzenberg, Blair-Loy, and Waite also found that having children increased rates of religious participation among adults.<sup>5</sup>

In other words, denominations should not just be concerned with having more babies because those babies represent the future of the church; forming an intact family unit helps keep current members attached to their faith and involved in their congregations.

The question of ethnocentrism must also be addressed, as I want to be very clear on this point. Using the aggregate white birthrate of each district (rather than the birthrate for all racial and ethnic groups) made sense because of the LCMS's demographic profile; it is one of the more homogenous denominations in the United States. I think that Sherkat was correct to describe all major branches of Lutheranism as *de facto* ethnic denominations.<sup>6</sup> One can argue that this is itself a problem, though I should note that it is certainly not a problem exclusive to Lutherans. In an overwhelming majority of congregations in America, at least four-fifths of all members are from a single racial

group.<sup>7</sup> The purpose of my analysis was to show that districts where the LCMS's core demographic group had a higher fertility rate tended to also be the districts where the LCMS exhibited slower rates of decline. But if the LCMS chooses to pursue natalist efforts in the future, it should aim to encourage family formation for all of its members, not just those with a particular racial/ethnic identity.

The information I provided about the LCMS's demographic characteristics was not intended to promote any exclusionary tendencies within the denomination. The LCMS of course should be a welcoming church to all people, regardless of race, ethnicity, or citizenship status. And it is worth noting that, when it comes to outreach to people from other racial and ethnic backgrounds, a recent study suggested that LCMS is one of the better performers. Wright et al. found that LCMS congregations were actually quite good about providing information to black, Hispanic, and Asian people who showed interest in the church; on this question, the LCMS outperformed the ELCA, the UMC, the SBC, and the PCUSA.<sup>8</sup>

I do not say this to imply that the LCMS should declare that its outreach efforts are sufficient, and I am certainly not implying that they should be abandoned. I do not speak for the LCMS, nor do I know what (if anything) the denomination will choose to do with the information provided in these reports. But the fact that my work focused on natural growth via family formation, rather than other methods of growth, does not imply that the denomination should give up its other outreach efforts.

I also understand and appreciate Mrs. Cook's point about causal pathways. When working on my report, I treated the LCMS as I would treat any other social organization (a political party, for example). I thus focused my attention on measurable variables like LCMS adherents. Questions of discipleship and the Holy Spirit were not part of my analysis because I know of no way to measure these things. That does not mean they are not important, but they are far removed from my own area of expertise.

Related to this point, I wish to note Mrs. Cook's own argument that "using scientific, evidence-based

<sup>4</sup> Arland Thornton, William Axinn, and Daniel Hill, "Reciprocal Effects of Religiosity, Cohabitation, and Marriage," *American Journal of Sociology* 89 (1992): 628–51.

<sup>5</sup> Ross M. Stolzenberg, Mary Blair-Loy, and Linda J. Waite, "Religious Participation in Early Adulthood: Age and Life-Cycle Effects on Church Membership," *American Sociological Review* 60 (1995): 84–103.

<sup>6</sup> Darren E. Sherkat, *Changing Faith: The Dynamics and Consequences of Americans' Shifting Religious Identities* (New York: New York University Press, 2014), 27–28.

<sup>7</sup> National Congregations Study, "American Congregations at the Beginning of the 21st Century," 2007, accessed February 16, 2016, [http://www.soc.duke.edu/natcong/Docs/NCSII\\_report\\_final.pdf](http://www.soc.duke.edu/natcong/Docs/NCSII_report_final.pdf).

<sup>8</sup> Bradley R.E. Wright, Christopher M. Donnelly, Michael Wallace, Stacy Missari, Annie Scola Wisnesky, and Christine Zozula, "Religion, Race, and Discrimination: A Field Experiment of How American Churches Welcome Newcomers," *Journal for the Scientific Study of Religion* 54 (2015): 185–204.

approaches is helpful in determining policy.” Unfortunately, using such an approach also seems to preclude the use of unmeasurable variables, such as the Holy Spirit. I chose not to discuss these considerations, even in a qualitative sense, because I lack the qualifications to do so. But my report does not dictate LCMS policy, and I assume that any policies the LCMS implements in the future will be created with crucial input from religious scholars and leaders who will ensure that the Gospel remains the denomination’s primary guide and inspiration.

In summary, Mrs. Cook brought up a number of critical points. I agree that the findings in these reports should represent the start of a research agenda rather than a definitive conclusion. But the connection between family formation and the health of religious institutions is real, even if certain causal relationships remain ambiguous. For these reasons, I encourage the LCMS to continue thinking carefully about this subject. I additionally hope that experts such as Mrs. Cook will continue to take part in these conversations and apply their talents to these and related questions.

*Best regards,*  
George Hawley, Ph.D.  
Assistant Professor  
Department of Political Science  
University of Alabama

Dear Mrs. Rebeka Cook,

THE LETTER OF CONCERN that you sent to the Revs. Heath Curtis and J. Bart Day concerning the December 2016 issue of *Journal of Lutheran Mission* was forwarded to me so that I could respond to the points you have raised. I authored the third article in that issue, entitled “Generational Generosity.” In February 2015, I presented a half-day workshop on the same material to President Matthew Harrison and about 60 administrators representing different areas of the Synod’s work. I understand from the Rev. Curtis that Dr. George Hawley presented his research at a separate meeting, which I did not attend. I previewed his two articles shortly before publication, but otherwise our work was independent. My comments below pertain primarily to my article, “Generational Generosity.”

First, I thank you for your interest in the membership trends of the LCMS and other church bodies; we both recognize that this is an important topic. I also appreciate your concern for a Christo-centric understanding of the church and your focus upon the means of grace as the only real entry point into the church. In Appendix B (p. 109–10), I cautioned against applying statistics pragmatically to issues that instead should be navigated by faith. I infer from your letter that you and I are in agreement as to the efficacy of the word of God, the ministerial versus magisterial use of reason, and the theology of the cross versus the theology of glory as I delineated those in Appendix B. I also want you to know that the Synod leaders who convened to discuss my findings in February 2015 strongly agree that the church should not be in the business of crunching the numbers in order to boost numerical membership; rather, they were seeking to understand the context in which the means-of-grace ministry operates, and they were willing to suffer further numerical losses if that happens to be the cost of fidelity to Christ and his word (cf. Curtis’s introduction to the December 2016 issue). While it is true, as you note, that the name “Jesus” seldom appeared in the articles authored by Hawley and myself, I hope that you can recognize that we in no way meant to diminish the glory that is due him but rather we were seeking to address a different question: What are the factors, humanly speaking, that help to describe and perhaps explain the trajectory of LCMS membership? Naturally, we were measuring only numbers on membership rosters, for no one but God can

discern hearts to see faith in members or non-members.

The bulk of your concerns, as I understand them, relate to the distinction between causation and correlation and the proper methods of quantitative analysis for supporting such conclusions. Here perhaps is where we may have respectfully to disagree, but I am confident that you can give me a fair hearing even if in the end you are not fully persuaded to accept my perspective.

I invite you to consider the distinction that I see between two different parts of my argument. On the one hand, I claim quite strongly that the decline of the birthrate is the principal cause of the decline of total membership over the past 60 or so years. On the other hand, I suggest more tentatively that contraception, delayed marriage, divorce, and several other factors each have played a role in causing the birthrate to fall. I see these as two different sorts of “causal” claims, requiring two different kinds of argumentation in their support. In the first instance, it is a matter of simple demographic arithmetic that for any time interval (year, decade, etc.): the starting population + births – deaths + immigration – emigration = the ending population. Of these variables, the birthrate has changed the most (declining to about one fourth of its 1950s level), while the other variables have remained comparatively stable over the decades. Swap the 1950 birthrate (ratio of births to base population) for the 2010 birthrate and, *ceteris paribus*, you’d have a declining membership in 1950 and a growing membership in 2010, but swap any of the others, and it would hardly change the situation. As I acknowledge in Appendix A (p. 108–109), the data sources are limited in both their scope and their accuracy; however, I also explain there that “long-term, major trends remain obvious despite data limitations,” noting for example that swapping the LCMS birthrate (declining steeply and becoming quite low) and ELS birthrates (declining, but not quite as steeply) would hardly make a difference in the overall pattern for either synod (p. 109).

As for the second instance, there is less certainty as to which factor or combination of factors may have caused the birthrate to decline and/or prevented the birthrate from rebounding. Here is where Pearson coefficients, multivariate analysis, longitudinal studies, and the like could be helpful. If you feel so inclined, I would encourage you to contact the LCMS Office of Rosters, Statistics and Research Services, which provided me with year-by-year data that could be compared across the Synod’s districts. I did far more number-crunching than what

was published, and I’m sure you could take things even further. Meanwhile, if you follow my footnotes, you will discover that some of the authors that I cited arrived at their conclusions on the basis of research employing the statistical techniques that you suggest (see, for example, Carlson’s study on student loan debt leading to delayed marriage and suppressed fertility).

Furthermore, it is worth remembering that the quantitative analysis appropriate to epidemiology, the discipline that you suggested as a model, may not be appropriate to other fields. As research moves from physical to biochemical to behavioral phenomena, scientific conventions typically ease the threshold as to which *p* values suffice for statistical significance (perhaps  $p < 0.0001$  in physics vs.  $p < 0.05$  in sociology or political science). Moreover, historians and lawyers follow the preponderance of evidence rule, which in some situations allows for circumstantial evidence to trump eyewitness testimony (not all eyewitnesses are reliable, and a diverse set of independent circumstantial evidence may, therefore, outweigh a direct witness). In my article, I was not so much trying to prove that smoking causes lung cancer, which would demand the epidemiological model that you recommended, but rather to show that we have good reasons to attribute the overall numerical decline of the LCMS to a declining birthrate, which in turn resulted from a variety of factors, of which I explore seven possibilities. Conversely, we do not have good reasons to attribute the overall numerical decline of the LCMS to a lack of good youth programs or an overzealous conservatism, since neither the quantitative nor the circumstantial evidence supports those claims. Hawley’s article, which is far more quantitative than mine, provides additional insights, such as his revelation that rural churches do a better job of resisting the decline of regional populations than we colloquially suppose, and that suburban churches do not always grow and even when they do grow, they grow at a slower rate than the base population in their neighborhoods.

After contemplating the concerns you that you have raised, I continue to stand behind my conclusions (p. 107, emphasize added): “The LCMS **has experienced** numerical decline” (this is an historical fact beyond question), “the chief cause of numerical decline **has been** a declining birth rate” (none of the other arithmetic variables in the standard demographic equation has had as momentous a shift as the birthrate, nor as monumental an impact on the calculation of the resulting population), and

“other factors, such as ... liberal or conservative ... rural or urban ... early childhood centers ... Hispanic outreach ... **appear to have shaped** the Synod demographics **much less** than the steep and persistent decline in the birth rate” (for if such factors had made a major impact, it would have shown itself in a Net Outreach number sufficient to overcome the declining birthrate; we have 60-plus years of historical records demonstrating that this was not so). I also continue to urge (and I sense that you agree with me on this point) an improvement of the Synod’s statistical record collection and further research, including longitudinal case studies (p. 108).

Let me also emphasize that I share your concern that the results of these articles would too hastily lead to policy implementations. Personally, I find the greatest value of the research that Hawley and I conducted not to be in any new answers we have produced but in the way our work has challenged old assumptions and invited new questions. Above all, however, I desire that any changes in attitude or practice would result from a renewed attention to Holy Scripture. There we find, as you noted in your letter, the doctrine of the means of grace. The word is efficacious, and that’s how the Holy Spirit builds the church.

I am, however, confused as to whether you regard the word of God as efficacious in infant baptism. The faith formation model that you propose in your letter speaks of sociological cofactors and risk factors in relation to an individual acquiring the Christian faith. Theologically, I simply cling to God’s promise that a baptized child acquires faith through that sacrament. Church membership is a different issue altogether, since a member could be a hypocrite and a non-member could be a baptized believer. The demographic analysis I provided does not measure the number of believers (the invisible church), but rather the number of members (the visible Synod). Both Hawley and I spoke of the birthrate as contributing to “natural growth” simply because this is the standard demographic term for population increase that results from the surplus of births over deaths; neither of us was thereby denying the efficacy of “the Holy Spirit working through His Word and Sacrament to bring a person to faith,” as you claimed that we were in your letter. Insofar as the LCMS remains faithful in its administration of the means of grace, I remain confident that the LCMS contains many believers, for God’s word is efficacious. The Church, capital C, is to be found wherever the marks of the church (means of grace) are found. Meanwhile,

in a synod where congregations and schools have closed their doors due to demographic collapse, and many other congregations struggle to muster a salary for their pastors, it is prudent to understand the demographic factors driving that decline, but none of this answers the question of whether the kingdom of God is growing or declining. Daniel’s faith persisted for 70 years of Babylonian captivity, no matter the social statistics working against him.

In Scripture we also find, as I emphasized in Appendix C (p. 110), an intergenerational ministry model in Titus 2, which I feel the church has neglected to her peril. Will a Titus 2 approach result in numerical growth of the church? I don’t know, and that’s not really my job anyway, for as I emphasized in Appendix B (also on p. 110): Let us “serve the Lord regardless of future membership trends. One plants, another waters, but God gives the increase (1 COR 3:7).” So, in the end, I am not offering any testable hypothesis, as if to say, “Implement Policy XYZ, and then you’ll see numerical growth,” but rather my message is “Trust God, cherish His institution of marriage, welcome His gift of children, follow His apostle’s exhortation to mentor the older generation to become mentors for the younger generation, and gather everyone around the means of grace.” That’s what I meant when concluding with the recommendation that the Synod “revive the teaching of a biblical and confessional Lutheran understanding of family vocation” and “foster intergenerational models of ministry” (p. 108).

I ground this recommendation on doctrine, not data; the demographic and cultural factors identified in my article serve primarily to reveal the context in which the twenty-first-century church must pursue her first-century mission. The quantitative analysis of the demographic equation and the qualitative analysis of historical-cultural factors were appropriate to this aim and communicated suitably to the intended audience. I remain perplexed by your assertion that “assuming the birthrate is causative of decline, the correlation is still not statistically strong enough to drive life-altering policy.” The alterations in “policy” that I recommend merely consist in renewing our appreciation for the vocation of parents and bridging the congregation and its families Titus 2-style, while also reconsidering a congregation’s stewardship of their called workers’ financial needs (e.g., aiming for full-time, rather than bi-vocational, salaries). My article imposes no new burdens upon the community, for the actions I suggest are what any sanctified Christian would delight in doing,

whether 2,000 years ago or today.

If you discover that the LCMS is misapplying my research to support any anti-biblical agenda, please alert me. I will stand with you in correcting them. For the present, I remain confident that President Harrison and the Revs. Curtis and Day are proceeding as faithful “stewards of the mysteries of God” (1 COR 4:1).

*Your brother in Christ,*

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