

# LETTERS

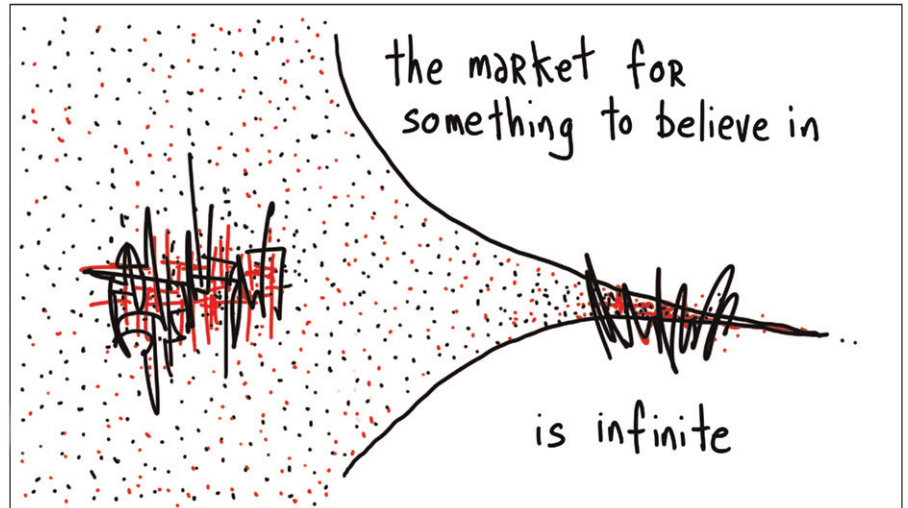
## AUTISM AND URBANIZATION

In their recent *Journal* article, Palmer et al.<sup>1</sup> showed that autism prevalence among schoolchildren is inversely related to the percentage of Hispanics in Texas school districts. The authors speculated that this may be a result of under-diagnosis of autism among Hispanic children, genetic vulnerability in non-Hispanic White children, or heightened exposure to unknown environmental factors in non-Hispanic White children. They identified the parameter of urban versus rural as having the highest risk ratio for autism. Importantly, in this study an urban versus rural designation was not correlated with the diagnoses of intellectual disability and learning disability, which did not include autism or autistic spectrum disorders. In two previous studies in Texas, the authors found the same parameter of urban versus rural as having the greatest risk for autism.<sup>2,3</sup> However, in those studies the focus was on exposure to environmental mercury.

Increased risk for autism with increasing degree of urbanization has been identified as a significant factor in multiple geographically and ethnically diverse areas including Japan,<sup>4</sup> Denmark,<sup>5</sup> the United States,<sup>6,7</sup> and in a meta-analysis of 40 population-based autism prevalence studies.<sup>7</sup> This may suggest that potentially

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increased autism risk as a result of urbanicity is not ethnically specific but may be more directly related to urbanicity.

There are an increasing number of reports of immune, autoimmune, and inflammatory aspects in the etiology of autism,<sup>9</sup> with the suggestion that neonatal environmental microbial exposures, as they relate to urban versus rural demographics, may be important in a role for urbanization in the risk for autism.<sup>10</sup> Increased disease risk with increased urbanization is a prominent feature in determining risk for asthma, allergic, inflammatory, and autoimmune disorders and is thought to be related to lowered microbial exposure in pregnancy and neonatal life.<sup>11</sup> Immune sensitization in early development, rather than ethnic background, may be related to urban versus rural disease distribution and may play a role in autism disease risk. ■

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4B122, 251 Bayview Boulevard, Baltimore, MD 21224 (e-mail: [beckerk@grc.nia.nih.gov](mailto:beckerk@grc.nia.nih.gov)). Reprints can be ordered at <http://www.ajph.org> by clicking the "Reprints/Eprints" link.

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## PALMER RESPONDS

In his letter, Becker suggested a spurious association between ethnicity and autism rates and offers the possibility that immune sensitization—as a function of increased urbanization—is what contributes to the risk of autism. Becker noted that there is increased disease risk for asthma, allergic, inflammatory, and autoimmune disorders with increased urbanization and that there is compelling evidence that autism also shares these risk factors. This observation is astute. Becker's observations suggest a scenario in which various environmental triggers inherent in urban living could initiate exaggerated immune response. If specific genetic susceptibilities interact with these environmental factors, then risk may be increased regardless of ethnicity.

Following this model, familial diseases that are known to be associated with families who have autistic children should also share similar risk characteristics. Indeed, it has long been known that there are higher frequencies of familial psychiatric conditions such as bipolar disorder and schizophrenia in families with autistic children.<sup>1,2</sup> Interestingly, similar to autism, schizophrenia is a chronic psychiatric illness with an approximate prevalence of 1% within the United States.<sup>3</sup> There is a demonstrated urbanicity risk associated with schizophrenia,<sup>4</sup> and—also similar to autism—increased risk with increased paternal age.<sup>5,6</sup> Further, asthma and autoimmunity have been shown to be significant comorbid conditions with schizophrenia<sup>7–9</sup> and there is evidence for common etiologic pathways between schizophrenia and autism.<sup>10</sup>

However, my article demonstrated that a lower autism rate among predominantly Hispanic school districts relative to predominantly non-Hispanic White districts in Texas persists after adjustment for sociodemographics, including urbanicity. What is important here is that both urbanization and ethnicity were significant independent predictors of autism rates in the same model after adjustment for other relevant covariates. So, urbanization did not explain the association between Hispanic ethnicity and low autism rates. We believe there are other unmeasured variables that may account for the ethnicity association (e.g., unmeasured social, economic, or other cultural factors, or even genetic differences). Becker's assertions are viable and worth pursuing. However, it requires intense resources to design studies to measure immune function, genetic vulnerabilities, and environmental exposures as mediators of the association between urbanicity and medical conditions such as autism. There are many emerging clues for this puzzle, but we are a long way from definitive answers to inform treatment and public policy interventions. ■

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## FEDERAL TAX LAW ALLOWS ACADEMICS TO LOBBY

As public health lawyers and long-time advocates for the use of law as a tool to improve the public's health, we applaud Longest and Huber's call for more direct involvement by public health academics in public policy advocacy.<sup>1</sup> Their description of the law governing lobbying by university employees, however, suggested much more restriction on such activity than federal law actually imposes. We write to correct that misimpression.

First, contrary to the authors' assertion that "overt lobbying" by charities is prohibited, federal tax law expressly permits charities to lobby within certain limits, and even provides powerful tools that allow charities to lobby without putting their tax-exempt status at risk.<sup>2</sup> Second, the relevant definition of lobbying, as set forth in the Internal Revenue Code,<sup>3</sup> does not include efforts to influence administrative regulations, as opposed to legislation. Third, the authors failed to describe several exceptions to the lobbying definition that allow public health faculty to communicate with legislators and take a position on specific legislation without engaging in lobbying. Two of the exceptions, for "non-partisan analysis, study, and research"<sup>4,5</sup> and for responses to a written request from a government body for technical advice,<sup>4,5</sup> are particularly useful for public health academics.

We agree with Longest and Huber that advocates, including public health academics, must be mindful of the relevant law governing lobbying by charities when contemplating initiating a communication intended to influence legislation. With sound legal advice, however, those who work for universities or other charitable organizations can participate directly in shaping public health policy through effective advocacy, including both direct and grassroots lobbying. ■

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### Contributors

E. K. Gorovitz and J. S. Vernick each researched the relevant law. Both authors contributed substantively to the writing of the letter and take responsibility for its content.

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### LONGEST AND HUBER RESPOND

We agree generally with points made about lobbying by Gorovitz and Vernick. However, we do not agree that our article contains several errors.

Gorovitz and Vernick took issue with both our use of the phrase "overt lobbying" and our assertion that it is prohibited for charities. We used the phrase to mean the obvious and extensive forms of lobbying available to

Coca-Cola and other for-profit firms in order to differentiate such lobbying from that permitted by charitable organizations, which are indeed affected by certain unique limits.<sup>1</sup> We agree with Gorovitz and Vernick that federal tax law expressly permits charities to lobby within certain limits.

Gorovitz and Vernick expressed concern that we did not make clear that the Internal Revenue Service's relevant definition of lobbying "does not include efforts to influence administrative regulations, as opposed to legislation." We see no error in our article, and agree with our critics that influencing administrative regulations in the purest sense is not lobbying within the strict federal definition. Our concern extends to when regulation and legislation are mixed, and the influence is directed at members of Congress. This complexity is why we advised in our article for "schools of public health to be guided by legal expertise in efforts to exert influence in public health policymaking."<sup>2(p52)</sup>

Their third concern was that we "fail to describe several exceptions to the lobbying definition that allow public health faculty to communicate with legislators and take a position on specific legislation without engaging in lobbying." We agree that exceptions exist and described many of them in our article, including

the preparation of testimony before a committee of the legislative body or participating in an agency administrative proceeding, as well as serving on an advisory board, working group, or task force at the request of an agency or legislative body.<sup>2(p53)</sup>

We have asked ourselves why Gorovitz and Vernick saw errors, when the most that should be said likely lies in the realm of differing interpretations of words or emphases. We believe the answer might be found in perspectives. Ours was an expansive article on the numerous ways public health faculty can constructively engage in influencing public policymaking. We devoted only one and one third columns to lobbying, with an emphasis on caution in its use by faculty and the importance of being guided by legal expertise in its use. Gorovitz and Vernick, consistent with their practice and academic interests, took a much more focused view of lobbying as a mechanism through which public health faculty can seek to exert influence in policymaking.

We could have written more extensively about lobbying, however, what we did write does not contain errors. ■

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Both authors jointly wrote and reviewed this letter.

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**ERRATUM**

In: Torrone EA, Thomas JC, Kaufman JS, Pettifor AE, Leone PA, and Hightow-Wiedman LB. Glen or Glenda: reported gender of sex partners in two statewide HIV databases. *Am J Public Health*. 2010;100(3):525–530. doi:10.2105/AJPH.2009.162552.

An author name was spelled incorrectly. On page 525, the last author name in the author by-line should read: Lisa B. Hightow-Weidman, MD, MPH.

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