

Article

The Barbarians Are at the Gate!

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Abstract

Nicholas Martin's contribution to science is well known. This article reviews one small part of his pioneering work that integrated political and social attitudes with behavior genetics. Nick Martin, in part, led to a paradigm shift in the social sciences, and in political science in particular. These fields were previously wed to behaviorist approaches and now routinely include genetic influences in both theoretical and empirical study. This article also celebrates a part of Nick's contribution that many do not know. Nick Martin does not just build science, he builds scientists. There are many who would not be academics or scholars without Nick's guidance, mentorship and friendship. This review was written to express the deepest appreciation for what he has done and continues to do for science and the scientist.

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Why care about attitudes, voting, religion or politics when humanity faces so many problems closer to our mortality? Indeed, for those who are attempting to cure diseases, treat cancer, help mitigate the onset of schizophrenia or treat any of those conditions that disrupt the lives of so many people, asking and answering questions about more basic human behaviors might seem less important. In a world of finite resources, exploring the sources of politics may appear an endeavor where time and money are perhaps best not spent. Nick's work helped many others see this differently. On the one hand, it might appear more practical to overlook politics and focus on more immediate health concerns. But there has arguably been nothing more devastating to the human species than humans. Politics affects everyone. Attitudes and beliefs in the aggregate shape the world we live in, the rules of society and how resources are allocated; they regulate the rights, freedoms and liberties we enjoy or are denied access to. The wars that continue to be fought over identity, culture, politics and religion; the drive of consumption; the need to have power and control over others and the devastation that comes from declarations of 'us' versus 'them', leading to mass suffering, genocides, holocausts and displacement of peoples — are all the result of political choices. These choices lead to an untold number of deaths, health-related disparities, malnutrition, abuse, stress, depression, deprivation, anxiety and violence.

While the discipline of political science has been the most preoccupied with addressing such dilemmas, the field, until recently, had a somewhat odd view of human behavior; mainly that it was absent in the human part. The discipline remained largely wedded to a Durkheimian ideal, embedded in a paradigm where social forces and external stimuli constituted the only meaningful cause of variation in human behavior. Political ideals were viewed as nothing more than social constructions — too recent a phenomenon and too context dependent to be passed down through

genetic transmission. The blank slate was as real in political science in 2005 as it was for John Watson's 'behaviorist manifesto' in 1913. This view was not limited to scholars or academics. Rather, those who regularly influence policy at the highest levels of government — secretary of states, national security advisors, presidents and secretary generals of the UN such as Woodrow Wilson, Zbigniew Brzezinski, Condoleezza Rice, Tijjani Muhammad Bande and Henry Kissinger, for example, were trained under such a background.

This myopic view of human behavior radically changed in the mid 2000s, due in large part to the guidance of Nick Martin and Lindon Eaves. Nick has led or been a major contributor to scores of studies on genetic influences of attitudes and ideologies, vote choice, political sophistication, partisan identification, political trust, immigration, out-group attitudes, political violence, morality, economic behaviors, educational attainment, sex differences, threat sensitivity, disgust, risk taking, fitness, fear, aggression, pursuit of power and rational action, among many other topics (for only a handful of his papers in this area, see Alford et al., 2011; Eaves et al., 2011; Hatemi, Alford et al., 2009; Hatemi, Funk et al., 2009; Hatemi et al., 2007, 2010, 2014, 2015; Rietveld et al., 2013; Smith et al., 2017; Sturgis et al., 2010; Verweij et al., 2008; Zietsch et al., 2011). No less than 10 special issues in top social science journals have been devoted to this area of research in the last decade. These studies did more than provide mere estimates of heritability, but rather used a wide variety of methods, including gene–environment interaction approaches, assortative mating, longitudinal models, cross-cultural and direction of causation models, extended kinships and genome-wide approaches.

Nick's leadership and scholarship led to a shift in theory as well — genetic influences were not identified to be simply operating on political attitudes. There is no gene for views on gay rights, for example, but rather modern attitudes were seen to reflect the same fundamental issues of survival and reproduction that confronted ancient humans. Essentially, modern views on

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immigration tap into the same emotional and cognitive mechanism surrounding the need to identify and address out-groups. Issues underlying universal health care are modern instantiations of how to share resources; issues of marriage and sex roles are contemporary forms of finding a mate and raising children and defense and punishment policies, no matter how complex, find their roots in protecting our families and group. The modern manifestation of genetic influences on these traits is complicated by institutions, technology, nation-states and other social movements. Certainly, the labels differ across time and space, but the underlying connection between the core issues of human survival — sex, group identity, food, shelter and defense — remains the same. And some combination of migration, genetic drift, assortative mating, mutation, recombination, culture, life events and local ecological adaptation drives variation on such traits.

Nick has been involved in some form in every major twin and genetic study of politics since the 1980s, served as principal investigator (PI) on a number of grants from the National Science Foundation (NSF) to study these traits and was a guiding mentor, along with Lindon Eaves, in several NSF grants to train political scientists in genetic methods. More than 50 political and social scientists were trained at the Institute for Behavior Genetics/Behavior Genetics Association methods workshop through these grants, leading to hundreds of publications that helped transform the field.

In 2008, I went to one of political science's largest conferences and there was a plenary-type speaker who, almost shouting, declared 'We must stop this introduction of genetics into our discipline'. He went on, 'Can't you see the barbarians are at the gate!' As I looked around at this stadium-sized conference hall, most of the audience was shaking their heads in agreement. Now, more than a decade later, in 2020, it is a regular occurrence to find neuroscience, hormones, genetics and biobehavioral models as mainstream political science. It is difficult today to find a discussion on human behaviors, beliefs, conflicts, identity and war, without at least some inclusion of both social and inherent mechanisms.

This transformation would not have occurred without Nick Martin. And this speaks to the importance Nick has played in the field, not only scientifically but also personally, as a mentor. For it is not only science that matters, but the scientist. And in this instance, the best way to explain Nick's role is to describe a bit about my own personal experience with Nick. Nick's influence was not nearly as direct as one might expect or anywhere near within the timeframe expected. Indeed, the foundational works of Eaves, Eysenck and Martin that identified genetic influences on individual differences in political values (Eaves & Eysenck, 1974; Eaves et al., 1989; Martin et al., 1986) went entirely unnoticed for 20 years in the discipline that was most in need of their research. This changed in 2004. By chance, one political scientist, John Hibbing, a congressional scholar at the University of Nebraska, came across Lindon's and Nick's work, and through a collaborator at Virginia Commonwealth University, Carolyn Funk, made contact with the good Dr Eaves. Lindon, gracious as ever, gave Funk access to his data, having no idea what he was about to unleash. Through a different understanding of disciplinary norms, they published on Lindon's data . . . without Lindon. On one level, that could have been a disaster, but the result of that unfortunate misunderstanding led to two incredible happenings. While Hibbing and company's findings were nothing new to geneticists, as they represented the results from Martin et al. (1986) and Eaves et al. (1989), it served as the first,

albeit accidental, step into introducing an entire discipline to a very different way of thinking.

The second benefit was far more personal. Their accident led to my introduction to Nick, although again not in a manner planned or expected. While convalescing with my brother Jon during his time at Law School at the University of Nebraska, he encouraged me to seek a different profession and go back to school. Having no clue on what I would study, but knowing a fair bit about violence, I walked into the political science department and met with Kevin Smith, the graduate director at the time. After a short period, I came to realize two things: political science had the most interesting questions, but it was missing half of the tools to study them. There were remarkably few scholars in political science who considered the importance of inherent differences in cognition, motivation, perception and attitude development to explain variation in behavior. I was fortunate that by coincidence, fate or accident, two of those scholars, John Hibbing and Kevin Smith, were at Nebraska. Even more serendipitous is that I came upon Nick's work, independently, not knowing of the interactions John had with Lindon or Nick's relationship to Lindon. After reading Lindon and Nick's work, I had an 'a ha' moment: there are inherent individual differences in political and social values that are genetically transmitted across generations. Perhaps this approach offered a way to help answer questions of: Why is there a Hitler, or a Pol Pot? Why are some people motivated to engage while others are not? Why are some so ready and able to rise up and fight for an identity that has nothing to do with their personal lives? Why are some willing to kill simply for a label? Why do some seek to elevate others, while some only want to further their own interests? Why do some resist equality while others embrace violence? And what makes us different? Nick and Lindon's initial contribution pointed toward a way of answering these questions that social learning models had yet to reasonably answer. It was unlikely I would answer these questions, but carrying forward Nick and Lindon's work was an exciting prospect, and so becoming aware of Hibbing's write-up of Lindon's data, I reached out to Lindon, having no idea what my colleagues at Nebraska had mistakenly done. Lindon's response to me was to 'go bugger off'. And so, I walked right from one minefield into another. I emailed maybe another 40–50 scholars in this area wanting to learn how to conduct behavior genetic analyses, where to start, how to collect data and so forth. Almost none responded. Two emailed back with a list of their publications and nothing more. In short, I was repeatedly given nothing but cold shoulders. One person meaningfully responded: Nick Martin, the director of the largest genetic epidemiology lab in the Southern Hemisphere, emailed me back, a part-time PhD student with nothing more to offer than my interest. He invited me to come work with him at the Queensland Institute of Medical Research. With no training in genetics, no understanding of matrix algebra, structural models or any real skills in research, I got on a plane and flew out to Australia with not even a place to stay and began working with Nick Martin. Nick treated me as one of his own PhD students, and much more than that. He also introduced me to a host of characters, the first being Will Coventry, who after a day put me up with a place to stay. And then began my real education in science. It was that email that began and set my career as an academic and a passion for science I never knew I had. And through Nick I met Sarah Medland who must be recognized because this progress in the discipline and my own would not even remotely have been possible without her guidance. And it was Nick who mended fences

and contacted Lindon and reminded him that some errors are just errors and not to blame the son 'for the sins of the father'. From there, I brought what I learned from Nick's lab to the Virginia Institute for Psychiatric and Behavioral Genetics and worked with Lindon and Mike Neale, Hermine Maas, Matt Keller and others who pushed the discipline further.

Nick does not just build science, but he builds scientists. I tell this story not because my role is important, in truth it is not, but rather because my story is not unique at all when it comes to Nicholas Martin. At any one time, you will find a handful of scholars, not Nick's declared students, but people he invests in, simply for their own sake and that of their ideas. The unique element is Nick. Anyone who knows anything about him knows he will support and mentor folks from any country, any place and any background. The only thing they have to do is have an idea and be willing to work on it. And there is no metric one can easily point to, to identify the depth of his mentorship. Because unlike most scholars, where there is a defined and official advisor/advisee role, Nick has been an advisor to scores of people who are nowhere on paper formally associated with him. That is the truest form of mentorship and selfless science. I am honored to write on behalf of all those students to celebrate a part of Nick's contribution that many do not know and to express the deepest appreciation for what he has done and continues to do for so many who stand on his shoulders and follow in his footsteps. There are so few people in science, or in any industry, like him. In this way, the apple does not fall far from the tree. There are many great scholars, many great intellectuals and many great leaders in the field. Nick is all those. But it is rare when you find someone as committed to the science as to the scientist. I would not be an academic, an intellectual or a scholar today without Nick's guidance, leadership, friendship, mentorship and care. The field of political science would most likely still be living in behaviorism. And I have no doubt that there are scores of other people who would say the exact same thing about their path in science. I am profoundly grateful. Thank you, Nick.

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