

# Back to the future

## Reflecting on the legacies of Lynton K. Caldwell, Robert H. Blank, and Andrea Bonnicksen

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Reviewing the work of Lynton Caldwell, Robert Blank, and Andrea Bonnicksen is both a privilege and a challenge. These three scholars rank among the key figures in the development of biopolicy as a legitimate research and teaching subfield within political science. Each of them worked in academia, on significant bioethical advisory boards, and with policy-making entities, and also contributed to numerous externally funded research projects. Across long and prolific careers, Caldwell, Blank, and Bonnicksen engaged seriously with the political, social and ethical issues raised by significant advances in many bio-scientific domains. This essay analyzes several of their works across two broad themes: 1) the development of the subfields of biopolitics and biopolicy, and 2) the tension between science policy and democratic governance. While each of them wrote significant and well-received books, the focus here is on insights to be gleaned from an idiosyncratic selection of their scholarly articles across the time period, 1966 to 2007. To borrow Michel Foucault's term, this brief and necessarily selective archaeology of the published journal record nevertheless demonstrates the significance, durability and prescience of the authors' insights. (I expect that at least one, if not all three, of these authors might raise objections to the mention of Foucault, but the term "archaeology" in this instance is apt.)

### Developing biopolitics and biopolicy

In the inaugural issue of *Politics and the Life Sciences* (1982), Robert Blank, Lynton Caldwell, doi: 10.2990/30\_1\_65

David R. Beam, Odelia Funke, and James Schubert commented on the emergence of the Association for Politics and Life Sciences (APLS) and the need to develop an institutionally secure and recognized biopolicy agenda in political science. Blank urged that, "in addition to the need for considerably more effort in politics and the life sciences in specific biopolicy areas," scholars within this emerging subfield "must take strong action to influence the very framework of policy decisions by infusing biobehavioral knowledge into research on the policy process itself" (p. 38).<sup>1</sup> This ambitious but inclusive agenda welcomed biopolicy work at the individual, social, and global levels—and embraced methodological pluralism. Despite Caldwell's concern that none of the "facilitating conditions" for a robust social and scientific research contribution—including "scholarly commitment, realistic funding, institutional support, and popular tolerance"—were "reliably present" (p. 45),<sup>2</sup> the scholars in this new community, facilitated by APLS publications and conferences, began the slow and sometimes thankless process of gaining legitimacy and recognition within the rigid institutional halls of American political science.

This task was complicated considerably by two contradictory trends in the social sciences in the 1980s and 1990s. While the scholars affiliated with APLS remained committed to methodological rigor (though not rigidity), many of the cognate social sciences such as sociology and anthropology enthusiastically embraced the "linguistic turn" inspired by French literary theorists such as Michel Foucault and Jacques Derrida. While I would argue that Foucault, in particular, made

significant contributions with his early to mid-career research, in lesser hands the twin shibboleths of deconstruction and “social construction” led to a great deal of academic posturing and nonsense.<sup>3</sup>

This era also witnessed the proliferation of topical and area “studies” programs, such as American Studies, Gender Studies, Science and Technology Studies, and Cultural Studies, all of which competed for the same University funds and arguably fragmented the coherence and collegiality of the social sciences. Still, noted sociologists and anthropologists such as Nikolas Rose, Gisli Palsson, Paul Rabinow, and Catherine Waldby developed a Foucault-inspired “biopolitics” from the 1990s onward that generated such theoretical concepts as biopower, biovalue, and biosociality.<sup>4,5,6,7</sup> Integrating this sociological understanding of biopolitics with the more empirically grounded biopolicy of scholars such as Blank, Bonnicksen, and Caldwell could prove to be one of the most fruitful research agendas that the contemporary politics and life sciences community has yet to pursue.

The other disciplinary force working against biopolicy in this timeframe was the rational choice “revolution.” As with the linguistic turn, some excellent,<sup>8</sup> and quite a bit of trivial, research has resulted from applications of rational choice theory, which basically applies the microeconomic assumption of utility maximizing individuals to political domains such as international relations and criminology. In this context, what matters is the degree to which rational choice crowded out virtually every other approach to political science in the 1990s. James Q. Wilson, who witnessed rational choice theory’s initial colonization of the Political Science Department at Harvard University, argued that “these people...don’t read Supreme Court decisions or history. They just sit around and make models.” Similarly, Stanley Hoffman stated openly, “I don’t think any of us [the classical political scholars of Harvard hired after World War II] would get tenure under the current conditions.”<sup>9</sup> The increasingly mathematical content of the flagship *American Political Science Review*, and the fetish for converting all research questions into formal models, made the efforts of Blank, Bonnicksen, and Caldwell—who remained interested both in essential questions of equality and human dignity, and in substantive policy knowledge—all the more essential and difficult.

Contemporary scholars with an interest in biopolicy broadly defined, including nanotechnology, neuroscience, reproductive health, and bioinformatics, thus owe a debt to these founders, who patiently pursued biomedical and environmental policy questions in the midst of significant opposing trends. At the start of the twenty-first century, controversial issues such as genetically modified foods, human enhancement, and synthetic biology, can be considered within a political science framework without elaborate and *a priori* justification. Likewise, affiliated sections of the American Political Science Association (Science, Technology and Environmental Politics) and the International Political Science Association (Research Committee #12, Biology and Politics) continue to gain new members and professional visibility. It is for precisely such reasons that we shouldn’t underestimate the effort and persistence it took—and will continue to take—to work at the intersection of biology and politics.

Entering the scientific discussion, another obvious challenge in doing biopolicy well is the constant pressure to master not only the theory and tools of public policy, but also to work competently within increasingly complex and highly specialized scientific domains. Few people have the time or resources to become credentialed experts in both political science/public policy and a scientific field such as molecular biology, cognitive neuroscience, or nanotechnology. Nevertheless, it is impossible to work effectively within science policy without some mastery of the technical details of the specific issue in question. The proliferation of university degree programs in science and policy and the emphasis on incorporating ethical, legal and social dimensions into publicly-funded research projects are promising developments for students of biopolicy. However, it remains the case that natural scientists who comment upon political and social issues tend to be granted more legitimacy and visibility than social scientists who presume to enter scientific discussions.

Recognizing the renewed emphasis on science in society, many American universities have initiated degree programs that integrate, in various ways and to varying degrees of depth, the natural sciences and the social sciences. For example, the departments of Biology and Chemistry at Georgia State University have recently used a large grant from the Howard Hughes Medical Institute to create an undergraduate

program on “Biotechnology and Society.” The program’s “Biotech Scholars” are expected to participate in public education efforts and to develop “an appreciation for the medical, agricultural, ethical and legal impacts of biotechnology on today’s society.”<sup>10</sup> Similarly, the Neuroscience and Public Policy Program at the University of Wisconsin-Madison offers students pursuing a Ph.D. in neuroscience the opportunity to also earn a Master’s of Public Administration, a law degree, or a Master’s in International Public Administration (M.I.P.A.).<sup>11</sup> Both of these examples reflect a larger pattern in advanced industrialized societies wherein scientists are increasingly called upon to engage with the public and to generate quantifiable social and economic benefits in return for public funding. Bonnicksen, Blank, and Caldwell are examples of biopolicy scholars who moved fluidly between academic, governmental, and nonprofit sectors, and whose work on various biotechnological and environmental issues was informed by credible science. The challenge for the emerging generation of biopolicy scholars is to continue this tradition and deepen the knowledge base these three pioneers established such that an analytical politics of the life sciences does not become a descriptive politics about the life sciences.

Caldwell recognized that “the expansion of the life sciences [made it] difficult to find a public issue that does not have somewhere within it a bioscience component” (p. 88).<sup>12</sup> His early recommendation that “biopolitical researchers may benefit from the work of the more reliable futurologists and technological forecasters”<sup>12</sup> should be reprioritized as another way for biopolicy to continue to progress. In an article written late in the twentieth century, titled “Is Humanity Destined to Self Destruct,” Caldwell lamented the fact that “vigorous organized efforts to forecast and evaluate possible futures...have been confined largely to so-called epistemic (like-minded) communities, with little visible impact on public opinion or policy” (p. 7).<sup>13</sup> References to technology assessment and forecasting also appear often in Bob Blank’s work. For example, a footnote in his 1992 article on health care resource allocation points the reader to Lester Milbraith’s argument that a long-range planning council for scientific issues could ease the pressure on overloaded governmental institutions.<sup>14</sup> Yet while growing concerns about environmental policy issues dovetailed with future-oriented tracts such as Alan

Toffler’s *Future Shock* (1970) and Paul and Anne Ehrlich’s *The Population Bomb* (1968) in decades past, futures analysis (forecasting) and biopolicy are usually separate from each other today. Finding common ground for the development of rigorous analytical and forecasting tools within biopolicy is one way scholars can draw upon and develop key insights from the field’s founders.

### Science policy, science politics, and democratic governance

The way in which scientific findings in the life sciences—and the ensuing public controversies—challenge democratic institutions and the capacity for consensus-oriented politics is a crucial underlying theme that connects the work of Caldwell, Blank and Bonnicksen. As early as 1967, Caldwell recognized the emergence of a “scientific super-culture” in the United States, asserting that, “physicists and biologists [have] become more important than industrialists and generals in shaping society” (p. 129).<sup>15</sup> Throughout his career, Caldwell canvassed a notable number of specific policy issues, but his concern about the tensions between classical theories of public administration, scientific expertise, and democracy constituted an over-arching frame for his scholarship (his doctoral dissertation focused on Thomas Jefferson and Alexander Hamilton and their dual influence on American public administration).<sup>16</sup> Indeed, as the “age of physics” gave way during the late Cold War to the “age of biology,” Caldwell recognized that new scientific findings in genetics and molecular biology provided an opening for a renewed social scientific interest in sociobiology. He stressed that the Social Darwinism of the early twentieth century was inherently flawed, and that findings in contemporary sociobiology remained highly tentative.

Nevertheless, he warned in 1980 that the “growing knowledge of the biology of human behavior threatens the assumptions upon which modern government and bureaucracy have been based” (p. 1), and asserted that sociobiology is heretical to the normative underpinnings of American social science in that it potentially undermines such foundational democratic ideas as universal and inalienable rights.<sup>17</sup> Earlier, in 1972, he asserted that the study of the relationship between

genes and behavior or genes and intelligence (he referred to the latter as “an almost forbidden subject”) is “especially troubling” in the social sphere, but asked “how can we expect to be realistic in our management of institutions of learning while we remain deliberately ignorant of this aspect of human potential?” (p. 447)<sup>18</sup> Intense media coverage of the controversies attendant upon Lawrence Summers’ (then President of Harvard University) speculation in 2005 that “innate differences” between men and women might partially explain the “gender gap” in math and the hard sciences,<sup>19</sup> and James Watson’s comments in 2007 about research into the links between genes and intelligence suggest that this topic remains as politically fraught today as when Caldwell wrote about it 40 years ago.<sup>20</sup>

Caldwell’s prescient analyses of biomedicine and sociobiology in the early 1980s also anticipated the explosion of public controversy and media attention surrounding such later works as Richard Herrnstein and Charles Murray’s *The Bell Curve: Intelligence and Class Structure in American Life* (1996), the search for the alleged “gay gene,”<sup>21</sup> and renewed research emphasis on the potential links between genetics and crime, as evidenced by the vociferous debate about the so-called “warrior gene” both in the United States and New Zealand.<sup>22</sup> His insights predated the launch of the Human Genome Project by approximately a decade, and many of the issues he noted then remain central both to the study of biology and politics specifically and American politics in general.

Robert Blank also frequently emphasizes the potential opposition between generally accepted American social and democratic norms and the cumulative findings of biomedical and neuroscientific knowledge. For example, in 1984 he criticized the Supreme Court’s reasoning in *Roe v. Wade*, noting that the Court’s reliance on fetal viability created a situation in which “technology might, if other social forces do not, bring us back to a situation where the only legal abortions are those during the first trimester” (p. 7).<sup>23</sup> Extrapolating from this case study, Blank argued that the increased complexity of and interaction between social, moral, and technical aspects of biomedical policy issues “is producing a situation where traditional policy making bodies appear impotent in resolving them” (p. 584).<sup>23</sup> In that same year, Blank concluded in an article on human sterilization and public policy that new reproductive technologies do not, in either their

development or use, easily fit within traditional norms of bargaining and compromise (p. 8).<sup>24</sup>

In the 1990s, Blank moved from analyzing biomedical issues to focus on the social scientific implications of the new neuroscience. His emphasis on the way in which scientific knowledge can undermine received social wisdom endured. Blank, echoing Caldwell’s earlier warnings about sociobiology, noted that increasingly sophisticated brain imaging studies “show significant differences in the brains of males and females” both in average and in normal distributions (p. 174).<sup>25</sup> Similarly, he argued that “investigational, conceptual, and interventional advances in the neurosciences strain consensus in research ethics, clinical ethics, legal ethics, and jurisprudence and demand innovative adaption in public policy” (p. 12).<sup>26</sup> Neither Caldwell’s nor Blank’s writings counsel shying away from difficult issues of science and democracy, nor do they propose a facile synthesis of the two. Instead, the combined impact of their published work in this area challenges emerging scholars to consider not only the endlessly fascinating policy details of specific biomedical or neuroscientific issues, but to connect these case studies to more significant and enduring political science questions about power, individual rights, democratic governance, and equality.

Andrea Bonnicksen also focused on the difficulties of making effective and workable policy decisions about biomedical and reproductive technologies. Beginning with her writings in the 1980s, Bonnicksen brought a feminist perspective to those biomedical issues that necessarily have women—their rights, bodies, and aspirations—at the center of the controversy. In 1987, Bonnicksen addressed the intense American debate about in vitro fertilization (IVF). Noting that IVF had, to that point, been largely understood as either a social issue or a medical issue, Bonnicksen proposed that reframing IVF as a feminist issue could potentially reignite a stalled discussion and reveal new dimensions of the policy problem. She concluded that IVF is an “issue for womankind” and urged development of “the habit of considering the woman’s interest when debating in vitro and developing policy to regulate it” (p. 153).<sup>27</sup>

Throughout her scholarly work, Bonnicksen, like both Caldwell and Blank, has emphasized the difficulties of effective public and policy engagement with advanced science and technology. However, while



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Caldwell and Blank often evinced pessimism about the ability of American democratic institutions to effectively respond to biomedical innovations, Bonnicksen has focused on potential ways to achieve policy solutions. For example, in “Demystifying Germ-Line Genetics,” Bonnicksen challenged those interested in politics and the life sciences to cut through the “partial truths and axioms” that often surround these issues and to focus instead on the basic question of how biomedical innovation can “contribute to the health of citizens across nations” (p. 248).<sup>28</sup>

Throughout her career, which has encompassed issues ranging from preimplantation genetic diagnosis to genetically modified animals, Bonnicksen has sought to reconcile scientific complexity with the fact that, however esoteric the problem, “all observers must eventually meet in the middle of the policy arena” (p. 198).<sup>29</sup> If we envision Caldwell, Blank and Bonnicksen engaging in an extended scholarly discussion with each other in the 1980s and 1990s, one of the most important insights to emerge from their collective output is that scientific innovations are often genuinely disruptive and must be analyzed as such. But policy scientists would also do well to recognize what Bonnicksen (in an article on legislative overreaction to news of Dolly the Sheep) has called the “essential homeliness”<sup>30</sup> of many of these policy questions.

### Conclusion

This essay covers only a small sample of the themes and insights emerging from the work of Lynton Caldwell, Bob Blank, and Andrea Bonnicksen. All three scholars were so prolific, and engaged expertly with so many specific issues, that a book is required to do justice to their collective impact on biopolicy as a theoretical and applied field. Nevertheless, even this short essay should indicate how prescient many of their insights were. To cite one more notable example, Caldwell wrote in 1972 that, “we are told that by the twenty-first century the greater number of people on the planet will have to attain some form of equilibrium but that material growth is likely to be slow—and yet we do not know much about the capability of large industrial societies to survive in equilibrium” (p. 447).<sup>18</sup> Right on cue, we are now in the midst of a global economic crisis, precipitated by the housing

market meltdown in the United States in 2008, and exacerbated by ongoing fiscal and monetary difficulties in the Euro-zone as well as the intractable controversy surrounding climate science and climate change mitigation policies.

Accurately predicting how societies, economies, and the natural environment will evolve over the next two to three decades is fraught with hazards. However, both individually and collectively, the legacies of Caldwell, Blank, and Bonnicksen provide a firm foundation for a politics of the life sciences that can engage rigorously with such issues, without either the incipient aridity of obsessive formal modeling or the self-indulgence of postmodern preening. Indeed, even a brief review of their work takes us “back to the future” in that, while the specific issues may change and the science become ever more rarefied, the basic policy questions of who rules, how can we protect the rights of the individual, how expert knowledge should be reconciled with popular governance, and how can we continue to survive on a planet both increasingly stressed and crowded, remain not only relevant but necessary.

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