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## **SIMON BRAND MEMORIAL ADDRESS:**

### **GLOBAL CHALLENGES: LOCAL ISSUES**

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#### **INTRODUCTION**

The world has changed so dramatically in the past few years that it is worth our time to examine both how it has changed and the implications of these changes for our work as economists, our governments and their respective roles, our international institutions, and democracy itself. These changes are so profound that even a decade ago, it would have been impossible to begin a discussion which bears much resemblance to the world we are now in. Of concern is that unless we actively examine the rapidly changing nature of our world, we will be driven by change rather than helping to shape it to the needs of our cultures, societies, economies, and the evolution of our democracies.

In this paper, I want to explore broadly a number of the changes in the world around us and the economic and social milieu in which we now find ourselves. For many of us involved in agriculture for some years, it is easy to see the WTO as a significant turning point, leading to increased and increasing trade among nations. What is less easy to see is the integration of the production and marketing systems across countries resulting from trade liberalisation. Similarly, the impacts of information technology may be of increasing importance to our work, but these same technologies are fundamentally reshaping the way in which democratic systems operate in the formation of policy, interest group formation and their roles in society, and the roles of traditional political processes in policy debate and resolution, at national, regional and even international levels. These are only two of the strategically significant changes we face. Following this exploration, I want to explore two broad areas of interest and concern in policy, biotechnology and rural policies, both of which appear to be deeply affected by these changing processes, and conclude with some observations about our roles as economists within our respective societies.

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## OUR CHANGING WORLD

The post war period which lasted nearly a half century focussed immense attention on the maintenance of stability in a bipolar world. Almost all other issues were subordinated to this over-riding concern in the formation of domestic and international policy. With its quite abrupt end at the beginning of this decade for almost the entire world, we were able to rapidly see that our societies and economies had changed dramatically over a fairly long period of time even though the effects of these changes had been substantially masked by the constant attention to bipolarity.<sup>2</sup>

Almost simultaneously with these changes came a series of other events including a substantial result for agriculture in the world trade negotiations, regional trade agreements, and the rejection by many countries of import substitution as a viable growth strategy. As well, the related technologies of information and biotechnology offered sharply different future paths for development, productivity advances, trade patterns, human and animal health, and personal growth, safety and nutrition. Standing in this region of the world, I must note as well, the dramatic and rapid change in policies within South Africa which continues to hold world attention, and that of the Commonwealth of Nations, Canada in particular. Finally, I call attention to the changing nature of our governments in responding to citizens' desires within a vastly different context than the period when many democratic structures were first designed and implemented.

For most of the post-war period through the late-1980s, agriculture and agriculture policy in most of the developed world was treated as an issue largely independent of the agendas of national governments. Abundant, even over-abundant, food supplies in the developed world relegated much of the policy making for agriculture outside of the national stage. For the most part, subsidies in one form or another from relatively open treasuries were the most convenient way of responding to sectoral concerns so that national attention could get on with health care, social support, education, infrastructure development, and a bipolar world. For the developing world, food and agriculture was a central issue, although, even in this case, agriculture and food was often isolated or independent of wider policy considerations within society and the economy. Solving the food supply problem was not often seen

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2 *The initial part of this paper is based on a number of recent articles and books regarding the changing role of democracy and the function of governments. Included in these works are the authors Bonnen et al. [1,2], Ohmae, Guéhenno, Mathews, Kahn, and Olson cited below.*

as an integrated policy process with nation-building, trade, investment, infrastructure and social policy. I hasten to add that the agriculture sector itself and many agricultural economists drew attention to the linkages between agricultural growth and development and overall national development, but I argue that central governments treated agricultural policy formation largely independently from many other public policy concerns.

This independence of agriculture and food systems from the wider national agendas of all nations began to erode rapidly in the late 1980s and the early 1990s. The trade negotiations in agriculture caught the world's attention; agriculture issues in the trade round became the sticking point across the entire negotiation. The G-7 heads of state had an agricultural trade item on their agendas for several years, raising the level of debate and forcing the resolution on agricultural issues. By the early 1990s, the treasury costs for agricultural subsidies around the world came under increasing scrutiny as national budgets faced immense pressure in this decade. Indeed, by the time the Uruguay Round was concluded, many developing countries had begun to quietly dismantle many of the trade inhibiting subsidies because of the fiscal pressures which provoked the inclusion of agriculture in the Round.

A substantial result of these changes is the growing integration of policy making across agriculture and other parts of the national agenda. The usual interest groups in agriculture are finding that a much wider array of interest groups are now involved in agricultural and food policy issues than ever before. Policy formation for the agriculture and food sector must not only take into account these wider issues but it must also be recognised that the agricultural sector has a legitimate interest in policy formulation across most other sectors of the economy, the social policy set within the nation, and foreign policy quite generally. Several examples come to mind including environmental policy, the convergence between biotechnology for plants and animals with that related to human health and disease, other natural resource issues including forestry and fisheries, social and ethical issues relating to the use of animals, communications technology and policy, and social policies as they affect rural areas.

An interesting example of the emerging interdependence of agricultural and national agenda issues came with the pronounced shift in the World Bank away from fostering sector specific strategies toward structural adjustment strategies at the macro-economic level. With the dominance of structural adjustment, agricultural policies were brought into line with wider concerns in the economy, forcing a substantial rethinking of the role and direction in

agricultural policies. This came following substantial independence in agricultural policy development in many countries for long periods of time.

Another dramatic change involves the role and nature of government itself. To make this argument, I want to stylise somewhat. For most democratic systems, elected representation in regional and national parliaments is based on a geographically defined area. This structure or model of representation goes back decades and even centuries. The original logic to this model has to do with the ability to represent the issues common to a region in a national or regional debate of governmental policy, when citizens in the area were largely homogeneous in social and economic views, and events tended to affect an area fairly uniformly. Social interaction was based almost exclusively on community level, and views within the community could be accurately and clearly articulated through this geographically-based representation.

The concept of community today no longer can be characterised as exclusively geographic. Communities and community interests are forming without regard to geographical proximity, in large part because of our ability to communicate with considerable ease across great distances. Interest groups are forming which span large geographical distances, not based on specific geographical boundaries. Indeed, interest groups are ranging widely across countries and oceans. Included within my definition of interest groups are multinational corporations, international institutions, voluntary non-profit groups, and any other co-ordinated single or multiple issue group. The result of this change calls into question the traditional character of geographic representation and to a considerable degree forces a balance between the distinctly regional concerns which can be expressed through democratic representation, with those which run across geographic borders regionally, nationally and internationally.

The traditional social cohesion at community level is being steadily replaced with a cohesion among individuals and groups which do not have a well defined location, nor can they be easily tapped by current democratic representation. One effect of this change is that the legitimacy of national governments, their institutions and powers, are increasingly called into question because of the struggle between legitimate local (i.e., geographically defined) interests and those interests that influence national and regional governments which have less discernable concerns which are specific to local communities. A frequent response by local groups is to seek devolution of powers from national or central governments to local communities. Another response to these pressures is for national governments to seek common cause with other nations in responding to the interests which cross national

boundaries. The result is a perceived, and in some cases, real weakening of the national government or state, giving up sovereignty to local and supranational institutions. Indeed, the legitimacy of the state itself may become an issue.

Ohmae (1995) refers to national and regional boundaries today as “cartographic illusions” because of the multinational character of so much of commerce today. Once the regulatory regimes are in place, international commerce can work across these boundaries, and interest groups of all kinds can form which bear little relationship to any local social or economic cohesion, but rather they can establish a fabric of interaction within a much wider political, geographic and economic set with only minor and declining interest in the geographical borders of the modern nation state.

A growing proportion of our economies are directed today to service industries, rather than the goods-based industries, such as agriculture. Even in the agriculture and food systems, an increasing portion of the consumer’s food dollar is directed to services incorporated in the food products. These services are substantially more difficult to measure and trace within and across our economies than the traditional “goods” on which much of our statistical and economic measurement systems were based. Even in the goods industry, these measurement problems are growing. For a “world mandate” automobile, a few dozen countries can contribute parts to an automobile assembled in a country. Rules of origin and measurement of value added is increasingly difficult. For the services sector, the problem is compounded. An example would be software development where components of a final product are developed simultaneously at several locations in the world in an integrated way, with no observable means of determining the origin of either the inputs or the outputs.

While these issues of “origin” are of growing concern to national statistical agencies, the really critical issue has to do with the power of the state itself. One of the core features of the nation state is the ability to tax its citizens and its economic activity to support common causes within the nation, ranging from defence to other desired social goals such as education, research, income redistribution and the like (Kahn, 1996). Clearly, as liberalisation in trade for goods and services takes place, each nation state is constrained by comparative levels of taxation (and the services provided by the state) in neighbouring nations and regions and those states competing with it for investment.

Two observations can be made. First, with goods easier to measure than services, nation states may find it easier to impose costs on goods producing industries than on service industries. These costs can be of two kinds. Clearly, one of these costs is taxation; the other is the power to regulate, imposing costs or forcing payment for negative externalities generated by these industries. Pollution regulation is an obvious example. Equally, goods producing industries are much more defined by location than are services. The latter remain very difficult to define by location and very often are footloose, able to move across geographical boundaries as convenience may dictate.

Second, because of the diminishing ability to measure economic activity particularly for services, the role of the nation state can be dramatically weakened in terms of its ability to tax, one of its core functions, as well as in terms of its legitimacy for its citizens. Again, the potential for devolution of powers, including taxation, to local levels to assure legitimacy of taxation is very great; this devolution in turn can substantially weaken the powers of central government and simultaneously erode the legitimacy of the nation state. The weakened attachment to the nation state by citizens which can result from these pressures, along with erosion of the social cohesion among citizenry in local communities, is being replaced with an economic cohesion which has little social or personal content.

Agriculture and agricultural policy formation are not immune from these pressures on the nation state. Not only are agricultural policy issues more deeply integrated with all other aspects of economic, social and foreign policy in the nation than ever before, the way in which policy development takes place for agriculture today must respect and interact with the eroding forces facing the nation. As well, the range of pressures brought to bear on agricultural policy processes go far beyond the traditional interests of agriculture and must be integrated into decision making. There is little choice but to grasp these issues more concretely than in the past and incorporate these into our analyses and policy instruments.

Bonnen argues that with these pressures on the formation of agricultural policy, the coherence usually found in consolidated policy for the agricultural sector will fragment, as will the points of entry to components of agricultural policy. (Bonnen & Schweikhardt, 1998:2-36) This is another manifestation of the widening interest groups involved in the formation of agricultural policy as well as the integration of agricultural policy making with many other policy arenas in governments.

In the sections which follow, I want to explore two current issues in policy which hold many of the pressures described above. Through these examples, we can explore more fully the ways in which these pressures need to be developed and incorporated into our analyses and policy formulation.

## **BIOTECHNOLOGY**

For the purpose of this paper, I take biotechnology to mean any of the processes in life sciences which alter the genetics within a species or cause the replacement/exchange of genetic materials between species in ways that go beyond what we would normally expect or predict would happen in the natural biosphere. These processes are critically dependent on both a new set of life science disciplines, as well as the capacity to track and store immense amounts of information about the genome itself. As a result, the sciences in biotechnology are deeply dependent on the emergence of information technologies, including those of rapid micro-measurement.

For agriculture, biotechnology holds considerable promise, for improvements in plant and animal nutrition, health, productivity, novel traits and foods, and lower use of chemicals in production. Beyond traditional agriculture, biotechnology can offer new and improved medicines developed from plants and animals, chemicals and pharmaceuticals, xenotransplants, and the like. Indeed, the line is becoming blurred between agricultural applications of biotechnology and those in human health sciences particularly, but also in related areas of forestry, mining, environmental mitigation, energy and waste management. Leading companies in agricultural biotechnology are merging with firms deeply involved in human health sciences as a consequence. With about two-fifths of the world's biotechnology devoted to the agricultural arena and an equal portion to human health sciences, the two together form the vast share of biotechnology efforts across the globe.

Substantial efforts are now underway in the private and public sectors to trace and map genes and gene sequences within the major plants of importance to agriculture. Once identified, these genes and gene sequences can be patented. For the USA, the patent definition can be very broad, extending from the gene or gene sequence within the species initially examined, to the same gene or gene sequence which might be found subsequently in other species. A very large share of the research conducted on identifying genes and gene sequences is found in the private sector, with the private sector holding the resulting patents. With the pressure to stretch research dollars in public institutions, universities, international research institutions and governments are joining hands with the private sector to pursue research, giving private



sector access to very wide ranging research within these publicly funded institutions. The dilemma posed for publicly funded institutions is the extent to which private sector research is allowed access to the results of this public research, which in some instances can be easily captured through patents in the private sector. Johnson explores the implications of these pressures on joint public-private research efforts in his recent Fellow's Address in the AAEA (Johnson, 1998).

The emerging science surrounding all aspects of biotechnology raises some very profound questions about the role of the state, the complementary role of markets, the nature of institutions at local, national and international level, ethical dilemmas and social and societal values. No longer is the science of productivity advances in agriculture exclusively within the domain of the agriculture and food sector. It is also apparent that existing institutions need substantial revamping to provide assurances to citizens and consumers of the safety and quality of food products, even though science can readily demonstrate improved safety and quality arising from biotechnology.

An example of the dilemmas posed by biotechnology is that the sanitary and phytosanitary (SPS) agreement reached in the last trade negotiations (the WTO) requires that science is the only basis for establishing national regulations regarding trade in products of agriculture. At the same time, citizens in many countries are clearly indicating substantial concerns for some products even though the science indicates that there may be no basis for such concerns. There is no scope within the SPS for responding to societal concerns. Governments then are faced with eroding their own legitimacy by moving contrary to societal concerns or deliberately abrogating their international undertakings through the WTO/SPS. While long term education and awareness programs by governments can ease substantially the concerns of citizens, the issues arise so rapidly in many instances that time does not allow these programs to work before substantial polarisation of views has occurred. This conflict facing governments can be particularly corrosive in terms of legitimacy of the nation state. Neither devolution to local level nor elevation to international level can resolve these problems.

Another aspect is that biotechnology is not restricted to agriculture, but shares its opportunity across many natural resource, environmental and human health sectors. The result is that policy making for biotechnology draws together a very wide array of diverse interest groups from local, regional, national and international levels which have limited or no experience in working together to find consensus for policy within the parameters already established internationally, or across the range of scientific disciplines which

are involved. Local representation in the democratic model offers little by way of solution since local issues tend to be narrower or uni-dimensional in scope when dealing with such a multidimensional issue.

Of a wide array of other issues, I want to explore one other. For many small and developing nations, assuring that the science can stay up-to-date in the rapidly changing field of biotechnology, as well as staying current with the regulatory regimes required for new and emerging products, can pose significant human resource capacity issues. This is the question at the centre of the debate on the Biosafety Protocol, and at the same time raises issues for the proposed Multilateral Agreement on Investment. In the latter case, trade and investment rules may make investment decisions for governments and private industry in biotechnology very difficult in some instances if societal concerns arise after investments are made.

Biotechnology is a "horizontal" issue for governments at all levels. Agricultural interests may not even be predominant in the policy debates. Further, the usual structures within government and democratic processes are not designed to deal with such broadly horizontal issues, even though substantial risk to the legitimacy of the nation state is involved.

## **RURAL**

Rural policies and agricultural policies in most countries have been complementary and closely allied for many years. Because agriculture occupied production space in rural areas, it seemed natural for agricultural and rural interests to coincide and be considered together for policy making. The initial literature on rural-urban migration was founded on agricultural (farm) real wage levels and comparable wages in urban areas. No consideration was given to alternative economic activity within rural areas at that time.

Rural areas are seen much more broadly today as both agricultural and residential/economic regions within the nation state. Economic activity within rural areas, either based on agricultural products, or independent from agricultural production, is now seen as a reasonable and necessary alternative to urban migration. In fact, rural concerns are re-emerging within the World Bank; the European Union appears to be shifting resources from agriculture to distinctly rural issues, and the USA and Canada are re-developing rural policies much more independently from policies for agriculture than in previous years.

In Canada for example, rural residents are among the three most disaffected groups within society. Feelings of isolation, lack of access to governmental programs, lack of access to commercial activity and business support systems (accounting, legal, computer access) are some of the reasons for this disaffectation. Interest groups within rural areas are forming which have no links to the agricultural sector, creating tension between agricultural and non-agricultural rural interests.

In addressing these issues, it is clear that agricultural policy *per se* holds little capacity for addressing full the range of issues arising in rural areas. Health services, education, infrastructure, power systems, communications, and water services lie beyond the scope of agricultural policy. Private sector services such as legal and accounting skills are equally important in developing economic activity in rural areas. The full range of services needed to foster rural development involves a range of governmental ministries as well as the private sector. Unless this full range of ministries and private services is involved in co-ordinating rural development, it is likely that significant components will be ignored or offer no synergy among the disparate efforts in these rural areas.

For governments, these horizontal co-ordinating efforts appear to be very difficult to arrange. The usual vertical mandates within ministries are not well adapted to decision making requiring the co-ordinated effort in programming of several of them. By and large, re-organisation of government to have a central mandate on rural affairs can result in duplicative efforts across several sectors competing for available resources in government and will not necessarily offer nation-wide systems for services such as education or health care. At the same time, without reasonable equity across urban and rural sectors in economic opportunity, rural to urban migration and growing disenchantment with national governments in the rural areas can result, with mounting pressure for devolving the rural mandate to local or regional governments. Succumbing to devolution pressures can lead to further weakening of the role of the nation state, and at the same time foster inequity across rural regions as the taxation capacity in provisioning the rural services by region can differ sharply.

## CONCLUSIONS

With the rapid changes occurring within and among nations, a central policy concern is the maintenance and continued legitimacy of the nation state. With pressures to both devolve powers to local or regional governments, and to yield powers to international institutions to solve problems commonly held

across a number of nation states, the risks to continuity of the nation state increase dramatically. Interest groups which go far beyond the traditional sectoral concerns or the local communities' issues represented through existing democratic structures are recreating a new balance of pressures on the nation state. The loss of community and social cohesion arising from these widely different interest groups within the community as well as from the broadening base of economic activity within communities, the rural communities in particular, is being replaced with an economic cohesion with minimal or no congruence with the geographic boundaries defining the democratic nation state and its core institutions. Citizens have declining kinship with this emerging economic fabric in their community. The risks inherent in these changes transcend the policies commonly found within sectors of the economy. Additionally, the co-ordination of policies across ministerial mandates to address more comprehensively the concerns at local level require a substantial rethinking of the decision and programming considerations within governments. Simultaneously, the nation state is forced to reconcile existing arrangements domestically and internationally with newer technologies imposing both local societal constraints and its democratic processes with those of international obligations.

All of these issues suggest an increasingly complex policy world within which to find viable and robust policies for agriculture. Economic and policy analysis for agriculture needs to range substantially beyond its traditional boundaries incorporating other disciplines including political science, law, history, sociology and others to find workable solutions addressing not only the specific issues within agriculture but also contribute to the strengthening of national and democratic institutions within the nation state.

## REFERENCES

- BONNEN, J.T. & SCHWEIKHARDT, D.B. (1998). The future of U.S. agricultural policy : Reflections on the disappearance of the "farm problem". *Review of Agricultural Economics*, 20(1):2-36.
- BONNEN, J.T., HEDLEY, D.D. & SCHWEIKHARDT, D.B. (1997). Agriculture and the Changing Nation-State: Implications for Policy and Political Economy. *American Journal of Agricultural Economics*, 79(5):1419-1428.
- GUÉHENNO, J.M. (1995). *The end of the nation-state*. Minneapolis : University of Minnesota Press.

JOHNSON, S.R. (1998). Strategic behaviour, institutional change and the future of agriculture. Fellow's Address. American Association of Agricultural Economics, Salt Lake City, Utah. (Forthcoming in *American Journal of Agricultural Economics, and Choices*)

KAHN, L.A. (1996). *The extinction of nation-states : A world without borders*. The Hague : Kluwer Law International, 1996.

MATHEWS, J.T. (1997). "Power Shift." *Foreign Affairs*, 76(1):50-66.

MCPHERSON, M.P. (1988). "Political perspectives." In: *The Canada-United States Free Trade Agreement: The Global Impact*. Washington : Institute for International Economics.

OHMAE, K. (1995). *The end of the nation-state : The rise of regional economies*. New York: The Free Press.

OLSON, M. (1982). *The rise and decline of nations : Economic growth, stagflation, and social rigidities*. New Haven : Yale University Press.