# "FUTURES STUDIES" WORKSHOP: A BRIEF REVIEW

**10 December 2007**
**SINGAPORE**


**S. RAJARATNAM SCHOOL OF INTERNATIONAL STUDIES**
A Graduate School of Nanyang Technological University

NATIONAL SECURITY COORDINATION SECRETARIAT

# "FUTURES STUDIES" WORKSHOP: A BRIEF REVIEW

REPORT OF A WORKSHOP ORGANIZED BY
THE CENTRE OF EXCELLENCE FOR NATIONAL SECURITY
WITH THE SUPPORT OF
THE NATIONAL SECURITY COORDINATION SECRETARIAT

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NANYANG TECHNOLOGICAL UNIVERSITY

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# EXECUTIVE SUMMARY

On 10 December 2007, the Centre of Excellence for National Security (CENS), with the support of the National Security Coordination Centre (NSCC), held the Futures Studies Workshop at the S. Rajaratnam School of International Studies, Nanyang Technological University. The workshop sought to provide a greater conceptual understanding and appreciation of the emerging field of Futures Studies and its potential utility. At the same time, the workshop also attempted to answer the question of how best to design a Futures Studies graduate programme that would be both policy-relevant and attractive to students and prospective employers alike.

To this end, the workshop brought together a stellar cast of luminaries in the discipline of Futures Studies—or Futurists—to discuss, debate and share the best practices in this area. In Panel 1, Professor Jim Dator, Director of the Hawaii Research Centre for Future Studies, gave a highly illuminating talk to clarify the intellectual boundaries of Futures Studies—what it is and is not, as well as provide a balanced perspective on the opportunities and constraints of Futures Studies as an academic discipline. The second speaker, Dr. Wendy Schultz, Director of Infinite Futures, added to Dator's ideas by giving a broad overview of Futures Studies' historical emergence and its connections with other disciplines. Schultz arrived at the conclusion that Futures Studies should necessarily adopt a multi-disciplinary approach in order to thrive.

Panel 2 featured equally eminent Futurists. Dr. Richard Slaughter, Director of Foresight International, spoke first and presented on the emergence of Futures Studies as a disciplined inquiry and its role in education. In particular, Slaughter shared more on how Futures Studies could be complementary to or integrated with the extant mainstream educational structure—the Australian Foresight Institute being one such successful model. The second speaker, Professor Sohail Inayatullah of Tamkang University, presented a new methodological perspective towards the study of the future, an approach that encompasses what are called the "six foundational concepts", "six questions" and "six pillars".

In the second half of the workshop, participants had the opportunity to engage the speakers in a frank dialogue on Futures Studies as well as clarify any queries or reservations relating to the field. This was followed by break-out group sessions, where ideas and suggestions to the applicability of Futures Studies and the design of a graduate level programme (in Futures Studies) were brainstormed and canvassed. The workshop closed with brief remarks and insights from the speakers.

For more information on the workshop's contents outside of this report, the speakers' presentations can be accessed at **www.rahs.org.sg**.

# INTRODUCTORY REMARKS BY HEAD CENS

**Associate Professor Kumar Ramakrishna**, Head of the Centre of Excellence for National Security, warmly welcomed the speakers and participants of the Futures Studies Workshop.

Ramakrishna noted that Singapore's role in the broad discipline of Futures Studies is nothing new. Since the 1980s, the Singapore Government has engaged in forecasting activities that postulated future geopolitical, economic and social trends. In this regard, it has used the well-known tool—popularized by Shell and the Global Business Network—of scenario planning. By identifying the key drivers that may shape long-term trends, one can start preparing for the future today. Scenario planning lends itself to working in fairly predictable environments where threats and opportunities are known, and where governments and businesses can respond by employing "best practices" to prepare for coming events. One example Ramakrishna highlighted was that of declining birth rates. This implied a smaller labour force and armed forces by 2020, a trend suggesting that governments and businesses may need to invest heavily in technological solutions to make up for the shortfall in manpower.

While governments and businesses can—through traditional scenario planning—prepare for the long term, the truth is they may not be well prepared for what will happen in the short term, that is, the next six months or the next two years. Conventionally, capable and experienced analysts rely on intuition and sound judgment to make sense of incoming data, and fill in the gaps of the threat picture. But in a globalized world where events and multiple trends are unfolding faster than ever, relying on the single analyst's judgment may lead to wrong assessments, or even paralysis due to information overload.

One possible approach to address these issues, Ramakrishna explained, could be Singapore's fledgling Risk Assessment and Horizon Scanning (RAHS) initiative. As a philosophy, RAHS looks to complement traditional scenario planning, so that even short-term horizons are not left out of the loop. RAHS also attempts to generate projective coherence (rather than retrospective coherence), whereby the analyst seeks to project his mind forward on to the stream of incoming data, identify the relevant dots, connect them and build the coherent threat picture before it occurs. The underlying concept behind RAHS is similar to what is popularly known as the "wisdom of crowds". Instead of relying on separate analysts working in isolation and in disconnected silos, RAHS attempts to pool the analysts' combined information-processing power as well as the unique perspectives that they bring. Technologically speaking, RAHS seeks to create a virtual network of analysts cutting across separate government silos, using state-of-the-art analytical tools, to greatly improve the overall quality of threat detection.

Futures Studies, or strategic foresight, can thus be viewed as the "broader intellectual nest" within which Singapore's RAHS initiative is embedded. In this respect, Ramakrishna noted that CENS was asked by its government stakeholders to help promote greater interest in Futures Studies in academia and tertiary institutions, of which the long-term vision is to ultimately produce graduates who would return to their own ministries and the private sector and, over time, create an emergent "foresight culture" that will engender a better anticipation of trends in both the short and longer terms.

Ramakrishna summed up by stating that the workshop aimed to ponder four broad questions vis-à-vis Futures Studies:

- What is Futures Studies? What is its value to both academia and the policy community?
- What do local and foreign academics and university administrators think about Futures Studies as an academic discipline?
- What kind of postgraduate courses and programmes can be designed to bring Futures Studies into the academic mainstream?
- How to craft a course or full graduate programme that will be attractive to both students and prospective employers?

# BRIEF OVERVIEW OF SINGAPORE'S RAHS INITIATIVE

**Mr. Patrick Nathan**, Deputy Director of National Security Coordination Centre, gave a brief overview of Singapore's Risk Assessment and Horizon Scanning (RAHS) initiative. To begin with, Nathan noted that in today's increasingly complex, interconnected and uncertain environment, there is a need to develop the capacity to better anticipate and be prepared for strategic threats to Singapore's national security environment. RAHS, in this aspect, seeks to enhance the early-warning capability available to policymakers so that resources may be more effectively allocated and preparedness for strategic surprise increased.

RAHS is essentially a suite of software tools that helps analysts detect and investigate emerging strategic issues and threats, typically on a two- to five-year horizon. Nathan used the case of SARS to illustrate the potential of the RAHS system to participants. In the SARS example, weak signals detected from obscure Chinese reports about a new mysterious lung virus as well as doctors' notes about a new patient with a high fever returning from Hong Kong would be fed into the RAHS system. While taken in isolation, these signals may mean very little, the RAHS tools would enable the analyst to see a larger and broader systemic picture of the problem vis-à-vis the signals, thereby highlighting to the analyst the potentiality of an infectious viral outbreak

RAHS is thus about providing a unique combination of cutting-edge concepts, methodologies and technological solutions in order to encourage inter-agency collaboration and foster informed analysis. Combining advanced data analytics with scenario building, systems thinking and complexity management, the goal is to take a whole-of-government approach towards strategic planning by connecting silos, changing mindsets and increasing collaboration.

Nathan added that the RAHS group—besides working with experimentation partners from foreign governments and international agencies—has also been conducting extensive outreach initiatives with local universities and think tanks. Other than identifying domain experts, establishing communities of practice and promoting collaboration, the outreach initiatives aim to encourage the academic use of the RAHS system to build models that may be useful in different political, economic, social and environmental domains.

RAHS, ultimately, is about a journey of discovery and it will continually seek to enhance its overall capability and utility to analysts. In the longer term, possible improvements to the system include: (i) the seamless integration of structured and unstructured data; (ii) incorporating and analysing multiple forms of media (text, audio and video); (iii) developing multi-lingual capabilities; and (iv) improving visualization as well as modelling and simulation capabilities. Finally, RAHS is also venturing forth into exciting, dynamic new areas and processes such as predictive markets, blogs, "Wikis" and massive multiplayer online games (MMOGs).

## What Futures Studies Is and Is Not: Understanding the Opportunities and Constraints of Futures Studies as an Academic Discipline

**Professor Jim Dator**, Director of the Hawaii Research Centre for Futures Studies, University of Hawaii, began by noting that Futures Studies, as a field of inquiry, has generally been misunderstood from two perspectives.

On the one hand, there are those who believe that it is, or pretends to be, a predictive science, which, if properly applied, strives to foretell with reasonable accuracy what the future will be. To this, Dator opined that futures studies of such ilk are unworthy of one's attention. There is nothing in society, beyond the most trivial, that can be precisely predicted.

On the other hand, it is also not the case that it is hopeless to try to anticipate—or to shape—events to come. Even though the future cannot be predicted, there are theories and methods that Futurists have developed, tested and applied in recent years that have proven to be helpful and exciting. Understanding and applying these theories and methods of Futures Studies will thereby enable individuals and groups to anticipate their futures more usefully, and to shape them appreciably more to their own preferences.

Dator stressed that there are a number of salient points one should remember in relation towards Futures Studies.

First, Futures Studies is about examining and exploring ideas about the future—what Dator calls "images of the future" or "alternative futures"—in which these ideas often serve as the basis for actions in the present. So, while "the future" cannot be predicted, "preferred futures" can and should be envisioned, invented and implemented.

Second, to be useful, Futures Studies needs to precede and then be linked to strategic planning, and finally, to administration. The identification of major alternative futures and the envisioning and creation of preferred futures guide subsequent strategic planning activities, which in turn determine day-to-day decision making of an organization's administrators. That said, it must be emphasized that this process of alternative futures forecasting and preferred futures envisioning is continuously ongoing and changing. In other words, the purpose of any futures exercise is to create a fluid, guiding vision—not a "final solution" or a limiting blueprint.

Third, Dator argued that any seemingly useful idea about the future would usually appear to be ridiculous initially. Because new technologies permit new behaviours and values, challenging old beliefs and values that are based on prior technologies—much of what will be characteristic of the future—will appear to be "out-of-the-box" and challenging in the present. Futurists, in that sense, have the additional burden of making an initially-ridiculous idea plausible by marshalling appropriate evidence and weaving alternative scenarios of its possible developments.

Fourth, Dator contended that technological change is usually the platform for social and environmental change. Understanding how this works—in specific social contexts—is therefore the key towards understanding what can be understood of the varieties of alternative futures, as well as options and limitations for "preferred futures". Broadly speaking, societal futures can be characterized by four main scenarios: continued growth, collapse, disciplined society and transformational society.

In sum, Futures Studies has often been resisted by formal academia. Partly in reaction to positivism, many academic departments may have gone too far in the opposite direction: refusing to become involved in addressing any of the growing problems that humanity faces, or in identifying and grasping the many opportunities ahead.

Yet, as Dator observed, there is clear evidence that more and more decision-makers need and want the kind of information that Futures Studies can offer. There is thus a growing demand for appropriately futures-oriented persons, processes and institutions that academia is not yet supplying. Indeed, applied Futures Studies is already thriving in Europe (especially in Finland) and East Asia (especially in South Korea), and educational institutions are beginning to concomitantly respond to this demand. Singapore will do well to latch onto this wave of opportunity and make significant contributions—not only to its own future but also to the future of the world as well.

## Overview of the Futures Studies Field: Historical Emergence and Connections with Other Disciplines

**Dr. Wendy Schultz**, Director of Infinite Futures, started off by emphasizing that inter-relationships between linear and non-linear systems, which make up reality, generate uncertainty. She further explained that trends and their impacts are "crashing" into each other all the time. This creates turbulence and change, but also inaugurates never-before-seen combinations of social impacts, of technologies, of ideas. The collision of trends generates "bi-sociation" or intersection—the perfect environment for creativity.

Consequently, Schultz remarked that this collision of trends creates new possibilities, opening the door for alternative future contexts for any product, service or brand. She further added that assessing the probability that any given image of the future might actually occur is an ongoing and constant process. As trends and emerging issues of change grow, transform, plateau or collapse over time, the probability of a possible future will vary. In this respect, organizations must continuously identify and monitor indicators of change, but more importantly, evaluate all possible futures to identify those that offer conditions most conducive to meeting goals that help achieve the organizational vision, or "preferred future". Nevertheless, Schultz cautioned that evaluating a possible future as offering conditions to achieve a vision is not the same activity as articulating a vision of a preferred future.

Schultz then went on to briefly trace the roots and intellectual trajectory of Futures Studies. She noted that, throughout the history of humankind and from man's first glimmers of self-awareness, people have always yearned to know about the future. That said, it was only at the turn of the twentieth century that mapping paths to possible futures became both a scientific and a political enterprise.

First, the life sciences' frustration with the reductive clockwork of the Newtonian paradigm spurred the emergence of systems thinking. Second, on the political front, both the administration of far-flung colonies and of newly formed centrally planned economies engendered policymakers' interest in forecasting resource availability and use. After World War II, Europe was re-visioning its future as part of re-building, newly independent states were grappling with defining their national identity for the future and the centrally planned economies were embarking on five- and ten-year national plans. These issues meant that scholars from diverse disciplines—philosophers, artists, economists, historians, sociologists, systems dynamics modellers, literature analysts, theologians, political scientists—started to look at the future in a more systematic manner and each brought his or her own academic field's frameworks and research methods to consider possible long-range futures for humanity and the planet.

Moving to the issue of integrated foresight, Schultz lamented that people often just choose one foresight activity as a stand-alone project, i.e. horizon scanning or scenario building or visioning. This creates weak and ineffective foresight projects. What is useful, instead, would be to sensitize oneself to change and identify the change emerging around oneself—one can then consider and map out the potential impacts of change, in which combinations of impacts create scenarios of alternative possible futures. Schultz stressed that once one understands the expanded opportunities or threats created by emerging change, he or she would be able to effectively articulate a truly creative, transformational vision of a preferred future and plan strategies to achieve it.

Schultz concluded her presentation with the assessment that a multi-disciplinary approach for Futures Studies should be taken. As strategic advantages increasingly occur where emerging innovations collide, conventional mono-disciplinary academic thinking can no longer effectively keep pace with change and its impacts. That is why leveraging on multi-disciplinary teams or trans-disciplinary thinkers, or both, to better understand the processes of change and the future would be a sensible and apposite path to take.

# PANEL TWO

## Why Futures Studies Now? The Emergence of Futures Studies as a Disciplined Enquiry and its Role in Education

**Dr. Richard Slaughter**, Director of the Foresight Institute, talked about the emergence of Futures Studies as a disciplined enquiry and its role in education. Slaughter noted that research on Futures Studies began as early as 30 years ago when new perspectives were sought to explain the changes in global political and geographical systems. There were, for example, much discussion and debate on the long-range impact of human activities on the global atmosphere in the 1980s.

Going further into the issue of "eco-foresight", Slaughter observed that societies have generally reacted to signals—concerning possible changes or degradation to the environment—in three differing ways. One part of society has attempted to downplay the impact of environmental changes by denying, disguising and confusing the signals while another has considered technological approaches to alleviate pressures placed on the environment. Then there are those who want to work on the underlying causes and change the structure of the eco-system.

Slaughter took the view that humanity is moving steadily towards what is metaphorically a "perfect storm", made up of factors such as oil depletion, irreversible climate change and environmental collapse. Yet, amidst this "storm", there also exist opportunities to transcend or "move on" to newer levels of civilized life.

In order to deal with what Slaughter termed as "the cilivizational challenge", one possible response is to explore how education can embrace forward thinking and perspectives at every level—from early childhood to post-graduate. Indeed, there is already an existing body of literature and professional practice to draw upon. One such example is the model that has been developed at the Australian Foresight Institute (AFI), a futures-oriented educational set-up established in 1999 to conduct post-graduate studies in strategic foresight. Broadly speaking, the key goals of the AFI are to facilitate the understanding and creation of foresight knowledge as well as to support the emergence of a new generation of foresight practitioners in Australia.

Slaughter added that the AFI's methods and perspectives focus on real-world issues and case studies. This provides a rich source of practical and applicable perspectives for its students, who are mainly mid-career professionals. At the same time, the AFI also took a step beyond "strategic foresight" and pioneered the concept of "social foresight", so as to anticipate a society that is responsive to its emerging near-term futures and be able to develop a range of social and institutional responses.

Slaughter also shared what he felt are key stages or phases in the development of social foresight:

(a) First, it begins with the most basic of perceptions in the human mind: the unsystematic use of forward thinking in the daily life of individuals.

(b) Next, as the need to prepare for future challenges intensifies and as societies move away from a past-driven culture, foresight concepts and ideas become more influential and result in the emergence of futures discourses.

(c) During the third phase, the use of Futures Studies tools and methodologies would become increasingly widespread.

(d) The penultimate stage is where futures processes, projects and structures are embodied and routinely used in a variety of organizational applications.

(e) The final phase is the level at which long-term thinking or foresight work becomes the social norm.

Slaughter summed up his presentation with the conviction that integrating Futures Studies as part of mainstream education would bring about the following outcomes: (i) increased optimism and empowerment; (ii) development of a futures vocabulary; (iii) greater ability to deal with uncertainty and risk; (iv) mastery of proactive skills; (v) development of leadership skills; (vi) access to social innovation strategies; and (vii) a more active and participatory citizenry. Ultimately, though, more than just a futures-oriented education system, there is also a salient need to establish a national foresight strategy or framework—one that is all-encompassing and incorporates elements of the education, business, government and civil-society sectors.

## Embedding the "Six Pillars" of Futures Studies in Different Ways in Diverse Curricula: Examples of Futures Initiatives from the Asia-Pacific Region

**Dr. Sohail Inayatullah**, Professor at Tamkang University, Taiwan, presented a new approach towards the study of the future, girded by what he called the "six foundational concepts", "six questions" and the "six pillars". Fundamentally, this is the argument that alternative future scenarios are conjured and derived, based on how the notion of the future is being perceived, preferred or even feared. Given that this notion can vary amongst individuals or organizations, the challenge is therefore to develop a set of tools and processes that societies could follow or implement to reach a consensus over the preferred state or outcome.

According to Inayatullah, neurological or brain processes such as "zero", "single" and "double loops" affect how the future is perceived. At the same time, past and embedded experiences also play a significant role in the way in which the future is thought about and preferred. For instance, he noted that while research results evince that individuals are more productive when working from home, societies tend to remain tied to old or conventional patterns of behaviour and resist making significant changes. The emphasis remains fixated on commuting to and from, and keeping regular work hours at the workplace. In Inayatullah's opinion, this inability to change or work towards a new future could be understood, if not answered, by applying a Futures Studies approach whereby the processes of change are better appreciated and acknowledged.

Inayatullah went on to elaborate on six key foundational precepts that shape the way in which futures are conceived, related to and discarded. The first concept relates to the idea of the "used future", which essentially meant the working towards or the shaping of a desired outcome based on experiences of other societies or communities—a borrowed or copied future. Most Asian cities, he observed, tend to follow the same pattern of urban development that their Western counterparts have previously adopted.

The second concept addresses the issue of a "disowned future". This denotes the situation whereby individuals and organizations miss out or "disown" the rationale and meanings of underlying actions and processes by overly focusing on strategic goals,

achievements and standard procedures. Inayatullah used the analogy of a school principal to illustrate his point. He argued that the principal may well do better by remembering what it was like to be a child, instead of solely concentrating on the curriculum design.

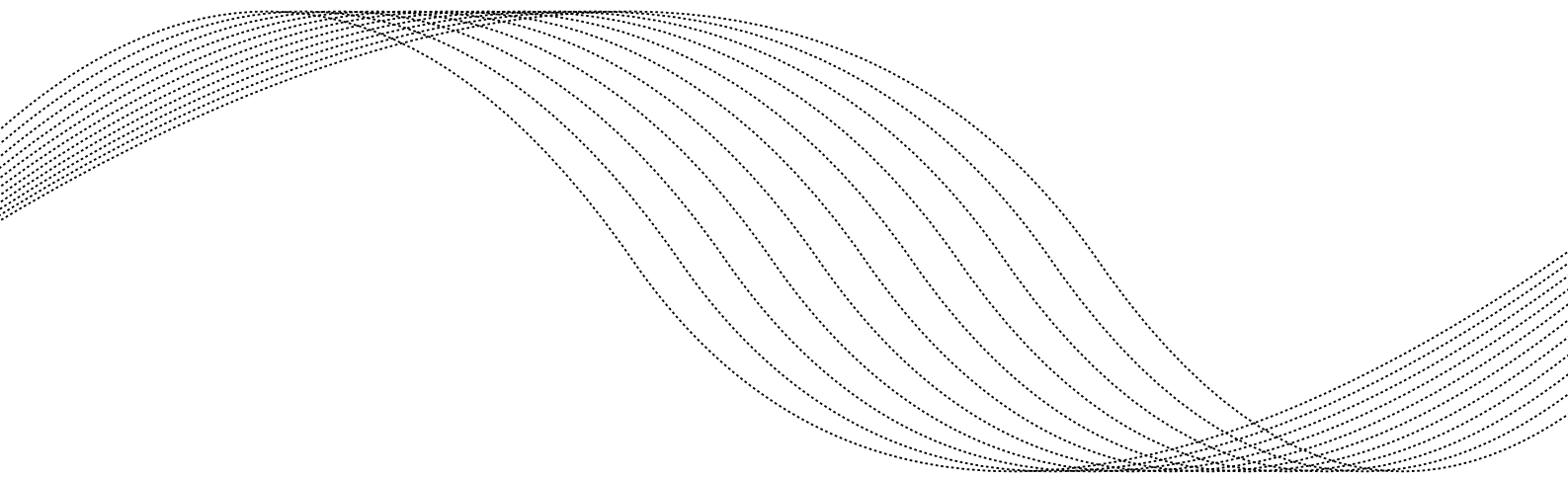
The third concept explores the possibilities of creating "alternative futures". This is the idea that focusing on a range of alternative outcomes would empower one to better cope and deal with any future uncertainties.

The fourth concept calls for the constant ideational alignment of day-to-day problems or concerns, with desired visions of the future. This entails the regular and continuous adjustment of measures and strategies such that they are in line and in harmony with visions of the future.

As for the final two tenets, the fifth concept focuses on social change and the importance of questioning root values and personal paradigms while the sixth concept articulates the belief that the future could be used to create more effective day-to-day strategies.

On the question of methodology, Inayatullah noted that, in general, there appears to be a standard path that most Futures Studies approaches follow. It usually starts with the mapping of data on the past and present. Next, trends are gathered to anticipate areas where innovation or problems are possible. This is then followed by what Inayatullah called "timing the future", or estimating the time path that events take to unfold. Following that, Futurists would attempt to "deepen the future" by applying either causal layered analysis or four-quadrant mapping to seek possible social, economic and political perspectives on the issues anticipated. The last two stages involve the generation of alternative futures or scenarios and the identification of solutions or steps needed to work towards achieving an ideal and preferred state.

Inayatullah ended his talk with a listing of institutions where programmes in futures studies are being offered. In this regard, the Tamkang University (TKU) in Taiwan and the University of the Sunshine Coast in Australia are among the major centres that conduct Futures Studies courses at either the undergraduate or postgraduate level. He added that TKU has the largest Futures programme in the world as well as publishes the globally oriented and trans-disciplinary *Journal of Futures Studies*.



## Conversations with the Expert Panel

When asked for perspectives on the literature of Futures Studies other than their own, Richard Slaughter identified two prevailing schools of thought. The U.S. school focuses heavily on the role of technology as the key driver of change while the European school pays more attention to culture as an agent of change. He then posited that the panel's overall approach synthesizes the two. Wendy Schultz added that the panel's ideas build upon existing disciplines by adding theoretical rigour and consistency through an integrated approach that avoids the pitfalls of being blindsided by other drivers of change that current disciplines are insufficiently sensitized to.

On the question of whether Futures Studies boil down to being a matter of self-fulfilling prophecies, Jim Dator opined that it was akin to self-fulfilling prophecies in the sense that Futurists work proactively towards ensuring one's preferred future materializes. As to whose future should prevail in the absence of consensus, Dator stressed that the aim should not be to engineer a solitary vision by eliminating differences but to make sure that diversity is managed in a manner that exploits its benefits, not suffocate them. Sohail Inayatullah added that at Futures Studies workshops held in the past, contending perspectives were managed through a process of "transcendence" that reduces idealism in each camp in order to achieve an outcome that has practical utility and was acceptable to all. Schultz further remarked that an important contribution of the "transcendence" process was the realization among participants that the existence of contending perspectives does not necessarily lead to a zero-sum game. Instead, participants learned to identify how their diverse knowledge and skills could be synthesized to mutual benefit in synthesizing desired futures.

## Summary of Break-Out Group Discussions

The participants were invited to deliberate on: (i) how Futures Studies could enhance the work of practitioners and academics; and (ii) the essential elements of a Futures Studies graduate-level programme.

Two key points regarding the usefulness of Futures Studies were brought up. First, the methodological tools provide a coherent framework for reducing uncertainty and enabling long-term planning. Second, its inter-disciplinary nature has the potential to facilitate the breaking of silos among agencies and provoke mindset change to enhance organizational resilience.

Still, there were some participants who expressed reservations of the practical utility of Futures Studies. For one, its focus on forecasting the future leaves much of its theories untested in the present. This lack of empirical rigour makes it difficult to gain widespread endorsement—as well as recognition—from established academic disciplines. Furthermore, as a field of study that draws its theoretical foundations from several existing disciplines, it may be more challenging for Futures Studies to distinguish itself as a distinct school of thought.

In response, some suggestions were raised to enhance the long-term sustainability of Futures Studies as a discipline. First, there is a need to clarify the scope and practical applicability of the discipline in greater depth. For example, the skill sets of a Futurist need to be more clearly defined in order for it to be distinguished from existing specialists. Secondly, the history of Futures Studies as a discipline could be more rigorously documented to enhance coherence and understanding of its purpose and contribution to the growth of knowledge.

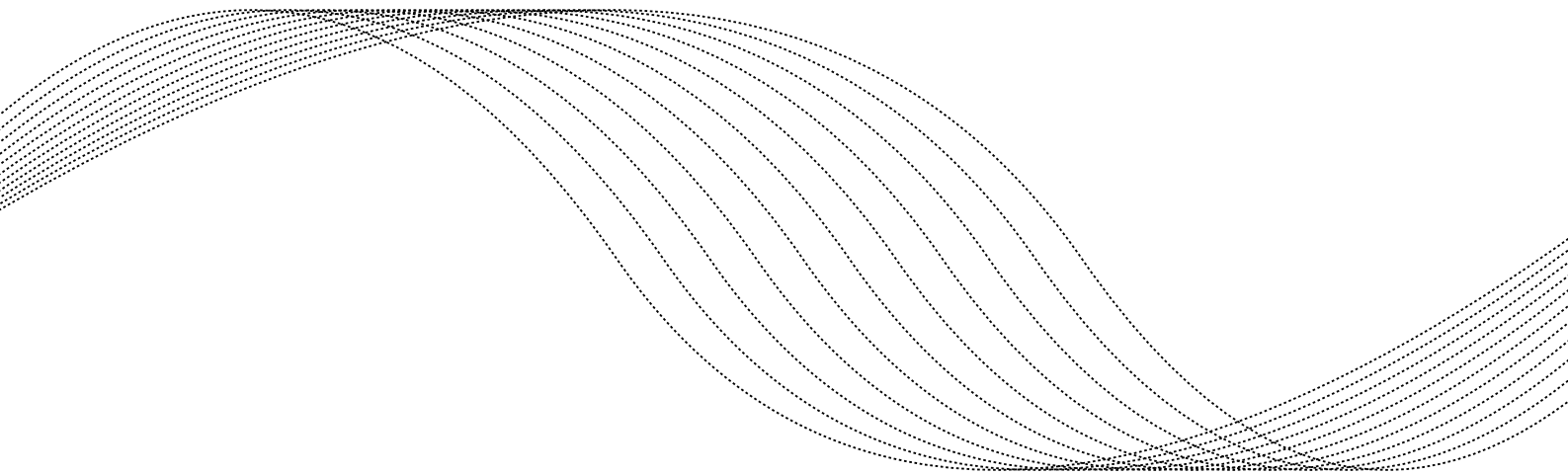
With regards to the issue of operationalizing Futures Studies as a Masters-level programme, two options were tabled. The first was to conduct it as a stand-alone and distinct module that focuses on the application of the core theories and methodologies to the subject domains of the various graduate students. The alternative option is to "futurize" the existing Master's programmes by introducing elements of Futures Studies methodologies and theories into the curriculum.

*Note: "Chatham House" rules were applied to enable for a free-spirited and creative dialogue; discussants are thus not named for this segment.*

## Brief Concluding Remarks

Jim Dator was of the opinion that a prime goal of Futures Studies is for its philosophy to permeate and be internalized into other disciplines. This argument divided the workshop participants into two camps: those who felt that there is a need for Futures Studies to be explicitly taught as a distinct subject in its own right and those who believed it is best that Futures Studies concepts and ideas be implicitly addressed by existing established disciplines. This led Inayatullah to conclude that Futures Studies generally appears to appeal to a niche audience.

Wendy Schultz concluded by making three key points to reiterate the value of Futures Studies. First, its inter-disciplinary approach transcends intellectual silos. Second, it provides a systematic framework for multi-disciplinary studies that are in demand today. Last but not least, in order for Futures Studies to thrive as an academic discipline, it needs to address practical challenges such as negotiating the competition with other fields of studies for limited resources.



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# WORKSHOP PROGRAMME 10 DECEMBER 2007

0915 *Welcome and Introduction* by Kumar Ramakrishna, Head CENS

0930 *Brief Overview of Singapore's* RAHS Initiative by Patrick Nathan, Deputy Director, NSCC

## Panel 1

0945 *What Futures Studies Is and Is Not: Understanding the Opportunities and Constraints of Futures Studies as an Academic Discipline* by Jim Dator

1030 *Overview of the Futures Studies Field: Historical Emergence and Connections with Other Disciplines* by Wendy Schultz

1045 Tea break

## Panel 2

1100 *Why Futures Studies Now? The Emergence of Futures Studies as a Disciplined Enquiry and its Role in Education* by Richard Slaughter

1145 *Embedding the "Six Pillars" of Futures Studies in Different Ways in Diverse Curricula: Examples of Futures Initiatives from the Asia Pacific Region* by Sohail Inayatullah

1230 Lunch

## Discussion Forum

1400 Conversations with the Expert Panel: *Making Futures Studies Work in the Singapore Academic Context*

1430 Briefing on Break-Out Sessions by Wendy Schultz: *Designing a Strategic Foresight/Futures Studies Graduate Seminar*

1440 Break-Out Group Discussions

1530 Tea Break

1545 Break-Out Group Reports

1630 Brief Concluding Remarks

1700 End

# ABOUT CENS

**The Centre of Excellence for National Security (CENS**) is a research unit of the S. Rajaratnam School of international Studies (RSIS) at Nanyang Technological University, Singapore. Established on 1 April 2006, CENS is devoted to rigorous policy-relevant analysis of a range of national security issues. The CENS team is multinational in composition, comprising both Singaporean and foreign analysts who are specialists in various aspects of national and homeland security affairs.

**Why CENS?**

In August 2004 the Strategic Framework for National Security outlined the key structures, security measures and capability development programmes that would help Singapore deal with transnational terrorism in the near and long term.

However, strategizing national security policies requires greater research and understanding of the evolving security landscape. This is why CENS was established to increase the intellectual capital invested in strategizing national security. To this end, CENS works closely with not just other RSIS research programmes, but also national security agencies such as the National Security Coordination Secretariat within the Prime Minister's Office.

**What Research Does CENS Do?**

CENS currently conducts research in three key areas of national security:

- Risk Assessment/Horizon Scanning
  - The art and science of detecting "weak signals" emanating from the total security environment so as to forewarn policymakers, the private sector and the public about approaching "shocks" such as terrorism, pandemics, energy crises and other easy-to-miss trends and ostensibly distant events.
- Social Resilience
  - The capacity of globalized, multicultural societies to hold together in the face of systemic shocks such as diseases and terrorist strikes.
- Homeland Defence Programme
  - The security of land-based, aviation and maritime transport networks and increasingly, the total supply chain vital to Singapore's economic vitality.
  - Health, water and food security.
  - Crisis communications and management.

**How Does CENS Help Influence National Security Policy?**

Through policy-oriented analytical commentaries and other research output directed at the national security policy community in Singapore and beyond, CENS staff members promote greater awareness of emerging threats as well as global best practices in responding to those threats. In addition, CENS organizes courses, seminars and workshops for local and foreign national security officials to facilitate networking and exposure to leading-edge thinking on the prevention of, and response to, national and homeland security threats.

**How Does CENS Help Raise Public Awareness of National Security Issues?**

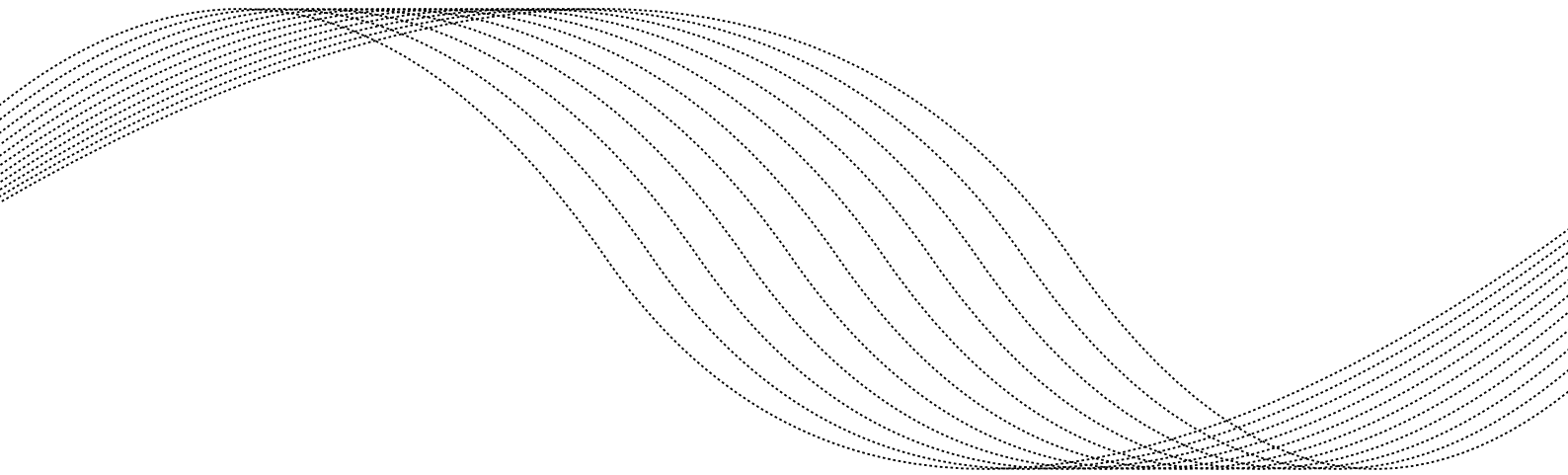
To educate the wider public, CENS staff members regularly author articles in a number of security and intelligence related publications, as well as write op-ed analyses in leading newspapers.Radio and television interviews have allowed CENS staff to participate in and shape the public debate on critical issues such as risk assessment and horizon scanning, multiculturalism and social resilience, intelligence reform and defending critical infrastructure against mass-casualty terrorist attacks.

**How Does CENS Keep Abreast of Cutting Edge National Security Research?**

The lean organizational structure of CENS permits a constant and regular influx of Visiting Fellows of international calibre through the Distinguished CENS Visitors Programme. This enables CENS to keep abreast of cutting edge global trends in national security research.

***For More on CENS***

***Log on to http://www.rsis.edu.sg and follow the links to "Centre of Excellence for National Security".***



# ABOUT RSIS

**The S. Rajaratnam School of International Studies (RSIS)** was established in January 2007 as an autonomous School within the Nanyang Technological University. RSIS's mission is to be a leading research and graduate teaching institution in strategic and international affairs in the Asia Pacific. To accomplish this mission, it will:

- Provide a rigorous professional graduate education in international affairs with a strong practical and area emphasis
- Conduct policy-relevant research in national security, defence and strategic studies, diplomacy and international relations
- Collaborate with like-minded schools of international affairs to form a global network of excellence

**Graduate Training in International Affairs**

RSIS offers an exacting graduate education in international affairs, taught by an international faculty of leading thinkers and practitioners. The teaching programme consists of the Master of Science (MSc) degrees in Strategic Studies, International Relations, International Political Economy, and Asian Studies as well as an MBA in International Studies taught jointly with the Nanyang Business School. The graduate teaching is distinguished by their focus on the Asia Pacific, the professional practice of international affairs, and the cultivation of academic depth. Over 150 students, the majority from abroad, are enrolled with the School. A small and select Ph.D. programme caters to advanced students whose interests match those of specific faculty members.

**Research**

RSIS research is conducted by five constituent Institutes and Centres: the Institute of Defence and Strategic Studies (IDSS, founded 1996), the International Centre for Political Violence and Terrorism Research (ICPVTR, 2002), the Centre of Excellence for National Security (CENS, 2006), the Consortium of Non-Traditional Security Studies in ASIA (NTS-Asia, 2007); and the Temasek Foundation Centre for Negotiations (2008). The focus of research is on issues relating to the security and stability of the Asia-Pacific region and their implications for Singapore and other countries in the region. The School has three professorships that bring distinguished scholars and practitioners to teach and to do research at the School. They are the S. Rajaratnam Professorship in Strategic Studies, the Ngee Ann Kongsi Professorship in International Relations, and the NTUC Professorship in International Economic Relations.

**International Collaboration**

Collaboration with other professional Schools of international affairs to form a global network of excellence is a RSIS priority. RSIS will initiate links with other like-minded schools so as to enrich its research and teaching activities as well as adopt the best practices of successful schools.

# ABOUT NSCS

**The National Security Coordination Secretariat (NSCS)** was set up in the Prime Minister's Office in Jul 2004 to facilitate national security policy coordination from a Whole-Of-Government perspective. NSCS reports to the Prime Minister through the Coordinating Minister for National Security (CMNS). The current CMNS is the Deputy Prime Minister Professor S. Jayakumar, who is also Minister for Law.

NSCS is headed by Permanent Secretary (National Security and Intelligence Coordination). The current PS(NSIC) is Mr. Peter Ho, who is concurrently Head of Civil Service and Permanent Secretary for Foreign Affairs.

NSCS provides support to the ministerial-level Security Policy Review Committee (SPRC) and Senior official-level National Security Coordination Committee (NSCCom) and Intelligence Coordinating Committee (ICC). It organizes and manages national security programmes, one example being the Asia-Pacific Programme for National Security Officers. NSCS also funds experimental, research or start-up projects that contribute to our national security.

NSCS is made up of two components: the National Security Coordination Centre (NSCC) and the Joint Counter-Terrorism Centre (JCTC). Each centre is headed by a director.

NSCC performs three vital roles in Singapore's national security: national security planning, policy coordination, and anticipating strategic threats. As a coordinating body, NSCC ensures that government agencies complement each other, and do not duplicate or perform competing tasks.

JCTC is a strategic analysis unit that compiles a holistic picture of terrorist threat. It studies the levels of preparedness in areas such as maritime terrorism and chemical, biological and radiological terrorist threats. It also maps out the consequences should an attack in that domain take place.

More information on NSCS can be found at **www.nscs.gov.sg**

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