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Strengthening Social Resilience, Building Social Capital: Perspectives from Israel and China

Dr. Reuven Gal

Prof. Shlomo Maital



March
2017



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ABOUT THE SAMUEL NEAMAN INSTITUTE

The Samuel Neaman Institute was established in 1978 in the Technion at Mr. Samuel Neaman's initiative. It is an independent multi-disciplinary national policy research institute. The activity of the institute is focused on issues in science and technology, education, economy and industry, physical infrastructure and social development which determine Israel's national resilience.

National policy research and surveys are executed at the Samuel Neaman Institute and their conclusions and recommendations serve the decision makers at various levels. The policy research is conducted by the faculty and staff of the Technion and scientists from other institutions in Israel and abroad and specialist from the industry.

The research team is chosen according to their professional qualifications and life achievements. In many cases the research is conducted by cooperation with governmental offices and in some cases at the initiative of the Samuel Neaman institute and without direct participation of governmental offices.

So far, the Samuel Neaman Institute has performed hundreds of exploratory national policy research projects and surveys that serve decision makers and professionals in economy and government. In particular the institute plays an important leading role in outlining Israel's national policies in science, technology and higher education.

Furthermore, the Institute supports national projects, such as the Ministry of Industry, Trade & Labor clusters - the MAGNET program in nano-technologies, media, optics and communication, chemistry, energy, environmental and social projects of national importance. The institute organizes also comprehensive seminars in its leading fields of research.

The Samuel Neaman Institute's various projects and activities can be viewed at the Institute website.

The chairman of Samuel Neaman Institute is professor **Zehev Tadmor** and the director is professor **Moshe Sidi**. The institute operates within the framework of a budget funded by Mr. Samuel Neaman in order to incorporate Israel's scientific technological economic and social advancement.

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Strengthening Social Resilience, Building Social Capital: Perspectives from Israel and China

**Samuel Neaman Institute for National Policy Research,
Technion Haifa ISRAEL
Tsinghua University, Beijing CHINA**

**Proceedings of a Workshop held on April 11,
2016
in Beijing, China**

- March 2017 -

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A One-Day Workshop

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Guangdong Technion Institute of Technology,
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Preface

Individual resilience pertains to the person's strength and coping behaviors that sustain individuals during stressful life events. Resilient persons can continue to function normally under adverse circumstances and revert back to their original state when the stressing factors end. ***Social resilience*** is the same concept, as applied to the community, neighborhood, city and entire nation.

Social resilience is the capacity of a society to prepare itself, to contain and effectively manage major national crises, to react in accordance with their severity and magnitude, and to “bounce back” expeditiously to an enhanced functioning. Resilient societies and communities demonstrate readiness to face a grand crisis, without giving up on national and strategic objectives.

Furthermore, national-social resilience can influence national leaders to make the optimal decisions at times of major crises. In short, social resilience adds the element of “being resilient together”.

All nations undergo stressful events and crises. Israel has had more than its share and as a result has extensive experience with the way its citizens respond to them. As China embarks on the regionalization of its economy through the Belt and Road Initiative, there are numerous potential challenges it might face, in terms of security incidents and larger identity issues related to its large diaspora.

In this one-day workshop, we propose to engage an invited group of senior policymakers, administrators and scholars in a discussion of the theory and practice of social resilience, in the context of China. We will share ‘lessons learned’ from Israel and in a group setting explore how they may be applied to China.

The morning sessions will be devoted to social resilience specifically. They will be led by Dr. **Reuven Gal**, Senior Research Fellow at the Samuel Neaman Institute in Israel and expert on social and national resilience.

The afternoon sessions will be divided into three parts: In the first part, Prof. **Shlomo Maital**, Prof. (emeritus) at Technion, Israel, and Senior Research Fellow at Guangdong Technion Institute of Technology, will talk about responses to crises and challenges through creation and strengthening of social capital, innovation and entrepreneurship. In the second part, Prof. **Hui Zhang**, from the Institute of Public Safety Research, Tsinghua University, will discuss Resilience and Public safety in China. In the third part, there will be an open panel discussion, allowing the audience to address questions and comments.

Invited participants will receive a collection of research papers and case studies on the subject. The Workshop will be in English, with simultaneous Chinese translation.

Workshop Program

9:00 – 9:15 Opening Remarks

Einar Tangen, Principal, DGI/SMP; Prof. Qidi Wu, former Vice-Minister of Education.

9:15 - 10:45 Dr. Reuven Gal: Individual, Social and National Resilience – how people, communities and nations respond to crises.

10:45 – 11:15 Coffee and tea break

11:15 - 12:30 Dr. Reuven Gal: Israel as a case study: lessons learned from a prolonged security crisis.

12:30 - 2:00 pm - Lunch Break

2:00 - 3:15 pm - Prof. Shlomo Maital: The role of innovation and entrepreneurship in building a resilient nation.

3:15 - 4:30 pm - Prof. Hui Zhang: Resilience and Public safety in China.

4:30 – 5:15 pm - Open panel discussion: Facing the coming challenges – Building Resilience for China.

5:15 – 5:30 pm - Closing remarks

About the Presenters

Dr. **Reuven Gal** is an Israeli social and clinical psychologist, a social activist and entrepreneur, researcher, author and consultant in the field of behavioral, communal and social sciences. He completed his B.A and M.A studies at the Hebrew University in Jerusalem and received his Doctoral degree (Ph.D.) from U.C. Berkeley, California, USA. Between 2006 to 2009 he served as the General Director of the Administration for National Civic Service, at the Office of the Prime Minister of Israel. Gal also served on the Israeli National Security Council as Deputy National Security Advisor, responsible for domestic and social policy (2002-2004); as Chief Behavioral Scientist for the Israeli Defense Forces (IDF; 1976-1982), and as Chief Psychologist for the Israeli Navy (1969-1972). Gal is the author or editor of six books including: A Portrait of the Israeli Soldier (1986), Legitimacy and Commitment in the Military (1990), The Seventh War (1990), Handbook of Military Psychology (1991), Service Without Guns (2006), and Between the Yarmulke and the Beret (2012).

Professor **Shlomo Maital** is emeritus professor at Technion-Israel Institute of Technology. He directed the Technion MBA program. For 9 years he was the academic director of TIM-Technion Institute of Management, Israel's leading executive leadership development institute and a pioneer in action-learning methods, from 1998 - 2009. In this capacity he worked with over 200 companies and 1,000 managers, led 22 benchmarking trips abroad, and designed leadership programs. He also worked on in-house programs for Israel's leading global companies: Strauss, Teva, Intel and others. He was summer Visiting Professor for 20 years in MIT Sloan School of Management's Management of Technology M.Sc. program, teaching over 1,000 R&D engineers from 40 countries. He is the author, co-author or editor of 14 books, including The Imagination Ladder (Mandarin edition: Hangzhu Books, 2014); His on-line course Cracking the Creativity Code – Part One is offered by Coursera and had over 15,000 students enrolled in its initial run. He teaches innovation regularly at Shantou University Business School

Professor **Hui Zhang** is a Professor at Tsinghua University, Institute of Public Safety Research. His primary research lies in the area of disaster prevention and mitigation, thermal/fluid science, crystal growth, and thermal spray coating. Prof. Zhang is now the Principle Investigator of a major research program of the National Science Foundation of China, focused on “study on the city's comprehensive risk assessment and several key issues in emergency response”. He is one of directors of the UTC-Tsinghua Joint Institute on Building Energy, Safety and Control System. He focuses on developing next generation building safety technology through integrated information and sense systems, effective situation awareness and evacuation strategy.

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Introduction

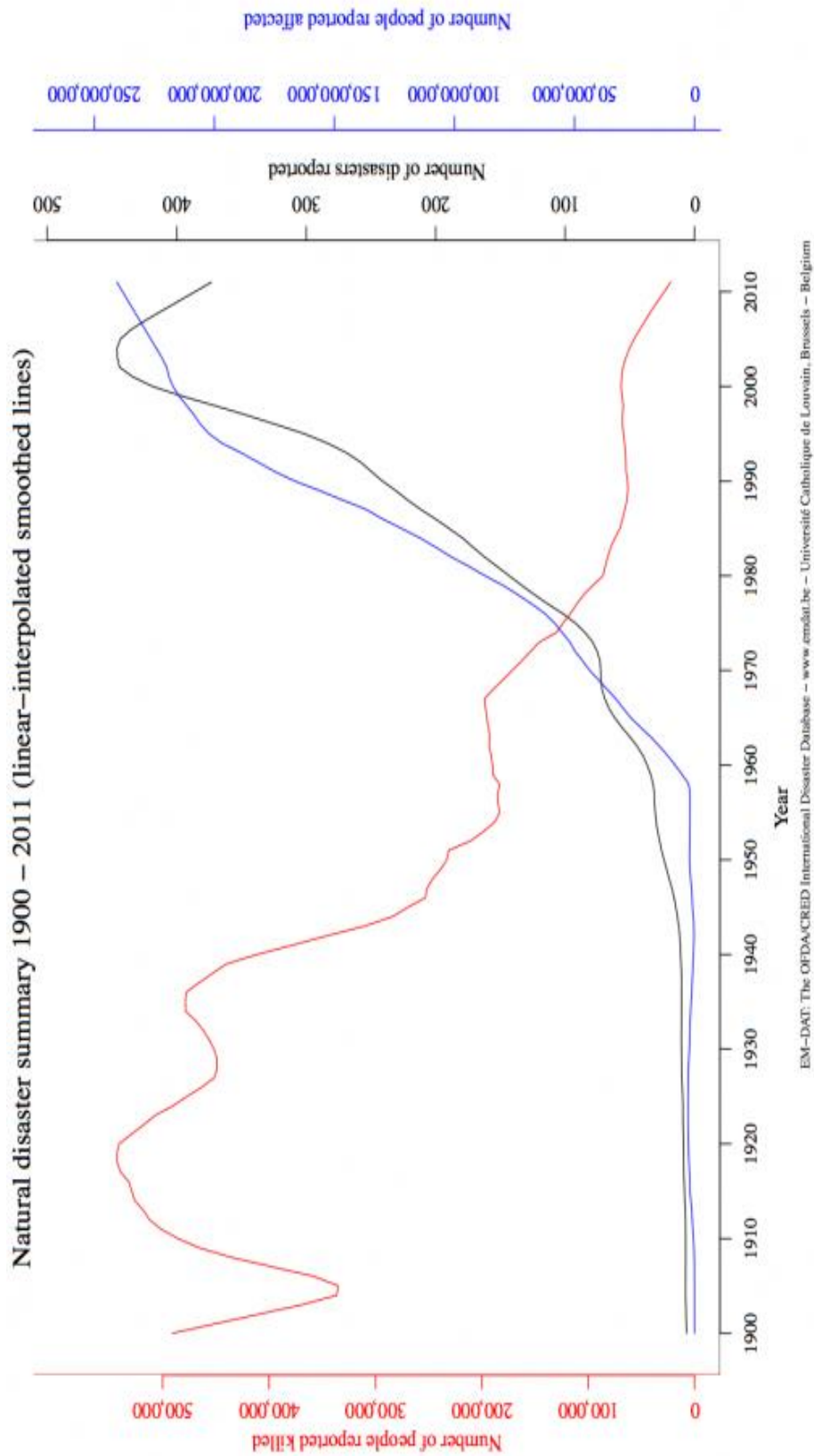
Prof. Shlomo Maital and Dr. Reuven Gal

Some 35 years ago, an American rabbi named Harold Kushner wrote a book with the compelling title "When Bad Things Happen to Good People". He wrote it as his response to a personal tragedy, the loss of his young son. Rabbi Kushner intended to offer comfort to grieving people. His book was a *New York Times* bestseller for many months and has brought comfort to many people in the U.S. and elsewhere. Some would say it enabled distressed people to bounce back after they had experienced extreme shocks; it improved their resilience.

Indeed, bad things do happen to good people. They include natural disasters, such as wildfires, volcanoes, tsunamis, hurricanes and typhoons, floods, earthquakes, droughts and storms; health-related disasters, such as epidemics; and civil disorder or civil wars, terrorism and wars among nations.

According to the website "Our World in Data", the number of deaths in the world from such disasters has declined since the 1920's, but the number of disasters, and the number of people affected, has risen steeply ever since – probably due to the rising world population and population density on the one hand and the progress in medical treatment and rescue attempts, on the other. (See Figure below).

This raises an important question for social scientists, engineers, and policy-makers: When bad things do happen to good people, and to good countries -- what must be done? How well do people respond, and what makes them bounce back? What factors help them become resilient and return to their normal lives? What role do social factors play in individuals' resilience? What can be learned from countries in which crises erupt and people react and adapt?



Source: <https://ourworldindata.org/natural-catastrophes/>

The State of Israel was founded in May 1948, when it declared its independence. Since that time, it has experienced a long series of wars with neighboring countries. Some of these wars involved not only armed forces on the battle fields, but also civilian population in their towns and homes. In addition, Israel has experienced frequent terrorist attacks, known as *intifada*, or “uprising”, which took large tolls of lives among civilians. Many of those attacks were carried out by suicide bombers, in central public areas, causing both vast casualties and extreme horror. As a result, Israel as a country has considerable experience with “bad things” and the reactions of its citizens following such events have been studied and measured by many social scientists, including Dr. Gal.

China, in contrast, has also had “bad things” happen, principally, related to climate and weather – floods, hurricanes, pollution, earthquakes, etc. In addition, the Chinese people are threatened by economic, demographic and other domestic emergencies. Both Israel and China, in somewhat different ways, have demonstrated, generally, high levels of social resilience.

About a year ago, we initiated a joint Workshop on Social Resilience, in cooperation with scholars in China, to explore topics related to personal, social, community and national resilience -- the ability of individuals, groups, communities, cities and nations to cope with external stresses, crises and disturbances. For both Israel and China, for perhaps very different reasons, this issue is of vital interest.

The Workshop was held on April 11, 2016 in Beijing. It was put together jointly by Dr. Reuven Gal and Prof. Shlomo Maital, from the Samuel Neaman Institute, and Prof. Hui Zhang, Tsinghua University. The event was organized effectively and hosted by Mr. Einar Tangen, an American business leader and media commentator, based in Beijing. The workshop triggered interesting reactions and generated several spontaneous presentations coming from the audience. This report comprises an account of the presentations made at this Workshop, including some of the more insightful comments by participants.

Some of the issues that were addressed in the Workshop are:

- What is ‘resilience’? How is it defined? Can it be measured?
- What has been Israel’s experience with repeated wars and terror episodes? What can be learned from empirical research done on this subject?
- what is social capital? How is social capital related to social resilience? How is it measured and why is it important?
- What has been Israel’s experience with Homeland Defense and its civil defense preparedness infrastructure, as it has evolved? How has this contributed to social resilience?
- In China, which factors determine community resilience? What is the role of information in strengthening resilience? What have we learned from research on emergency management in China?

The content of this volume is as follows. In the first of his two presentations, Dr. Reuven Gal outlines the foundations of individual, social and national resilience, and provides some useful operational definitions. In his second presentation, Dr. Gal presents a case study of social resilience in Israel during the second *intifada*, including some detailed measurements of resilience and the resulting analysis.

Prof. Shlomo Maital then discusses the role that social innovation and entrepreneurship plays in building a resilient nation, and focuses on the crucial importance of social capital, a form of capital that is rarely measured yet is vital to social and national resilience.

Col. Amir Eshel, who prior to his current role as Israeli military attaché in Beijing, was a senior officer in Israel's Home Front Command, describes how Israel's military prepares the nation for emergencies, where preparedness can be an important element of resilience.

Finally, Prof. Hui Zhang and Xinzhi Wang, from the Dept. of Engineering Physics and the Institute of Public Safety Research, Tsinghua University, present their detailed paper on "Community Resilience and Public Safety Research in China". We conclude with the interesting comment by Ambassador Chomicki, offered during the discussion period.

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We would like to thank, first and foremost, Mr. **Einar Tangen**, Design Group International, Beijing, for organizing the Workshop and providing a convenient venue in Beijing, and the Samuel Neaman Institute for National Policy Research, and its Director Prof. **Omri Rand**, for supporting this project and volume. Special thanks to Col. **Amir Eshel**, Israeli Military Attache in Beijing, and formerly Chief of Operations, Homeland Front Command, IDF, and to Ambassador **Tadeusz Chomicki** -- both have enriched the Workshop with their illuminating comments. We also thank **Rifi Ron** for diligence in tackling a difficult task of transcription, and Mrs. **Dorin Almog-Sudai** for her editorial work. Personal and worm thanks go to Prof. **Na Guoyi**, who had made our stay in Beijing so enjoyable.

Individual, Social and National Resilience: How people, communities and nations respond to crises.

Dr. Reuven Gal

**Individual, Social and National Resilience:
How people, communities and nations respond to crises.**

Dr. Reuven Gal

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Samuel Neaman Institute For National Policy Research, Technion.

Presented at –

**Resilience Workshop
Beijing, April 11, 2016**

Introduction

I want to begin by saying that I'm not here to educate you or teach you about resilience, I'm sure you are all familiar with the term and are involved in research and studies in this area. And so I think the benefit that you can all have is by looking at this subject *from different angles and from different perspectives*. I believe that the mere fact that I'm going to present it from the Israeli point of view and prof. Zeng will present it from the Chinese point of view, and then prof. Maital will do the same from innovation and social-capital point of view, will enrich our understanding of this concept -- because resilience is quite a complicated concept and has many perspectives to it.

Here are some of the subjects that I hope to cover during this morning. We will start with several definitions of Resilience, at its three echelon levels: individual, community, and national. I'll mention briefly what is not included in Social Resilience, and then I will try to explain what are the components, or the factors, that comprise social resilience, the way I see it; I'll give you an historical example and will end with some conclusions. This will be the first lecture of this morning.

Points of Discussion

- Definitions of Resilience.
- Definitions of National-Social Resilience.
- What is **not** included in these definitions?
- The components of Resilience
- An historic example
- Conclusions

In the second part I will move on to give you an example of how we use in Israel the concept resilience and how we measure it and I will describe to you a case study of national resilient behavior, as demonstrated in Israel in the early 2000 period, that was quite dramatic in Israel's history.

What is Resilience?

What is Resilience?

- A simple definition of RESILIENCE:

**The ability to become strong,
healthy, and functional again --
after something bad happens.**

A simple way to talk about resilience, in simple words, is to say that this is "The ability to become strong, healthy, and functional again -- after something bad happens". This is using very general terms, because 'something bad that can happen' could be of all sorts and nature. It can be an earthquake or a tsunami, it can be a war or a series of terrorist attacks, it can be an economic crisis, or a political calamity -- anything that might be called 'bad happening' can be relevant here. And resilience is just the fact that you face such a situation and you manage to stay strong, healthy and functioning while that happens.

By the way, the origin of the term, as you probably know, and certainly the engineers among us, is in physics, not in psychology or in sociology. In material science, *resilience* is *the ability of a material to absorb energy when it is deformed elastically, and release that energy upon unloading*. But the behavioral scientists, as we see, "captured" the term and they use it in their own way. In fact, it is very close to several other terms that psychologists often use, like adaptation, adjustment, coping, overcoming -- these are all related or relevant terms.

Individual Level:

At the individual level –

Resilience is the ability, of some people, to be knocked down by a crisis and come back stronger than before. Rather than letting the disaster overcome them and drain their energies, they find a way to rise from the ashes and recover. Researchers have identified some of the personality attributes that make someone resilient, among them a positive attitude to life, optimism, the ability to regulate emotions, and the ability to see failure as a form of helpful feedback.

We have to remember that the term resilience started at the individual level. And when we talk about resilience at the individual level, it has to do with the clinical approach that we call 'positive psychology' and it has to do with the ability, of some people, not all of them, to be knocked down (I could not find a better word for that) by

a crisis and come back stronger than before. Rather than letting the disaster overcome them and drain their energies, they find a way to rise from the ashes and recover. This is a bit of a literary description, but really what it says is that it's some type of personality structure. It has to do with the personality of the individual, who, when confronted with a strong crisis, will not collapse, he will not give up, he will not be devastated -- but rather will be able to overcome this. And let me tell you as a clinical psychologist that not all the people have this type of personality. Throughout my career I have seen many people who were not resilient and when faced with crisis they did collapse and did fall down.

Yesterday evening I had a lovely conversation with Prof. Na, here, and we talked about a wonderful book by Victor Frankl "Man's search for Meaning", a story of a Jewish man, who suffered through the Holocaust in Germany, in Poland actually, at the Auschwitz concentration camp, as well as others -- and survived. He survived only because he had this incredible level of resilience and he had the ability to look for meaningfulness and a reason to live and that's what kept him alive.

The other part of the individual-level slide talks about some of the personality traits that usually go together with resilience, such as a positive attitude to life. If you think of life in positive terms, as a challenge, as a way to accomplish yourself, to develop yourself as well as others, if you approach life with such a positive attitude – you'll show higher resilience at times of crises. Another trait is optimism. In fact, optimism is the key term here, as well as the ability to regulate your emotions. For example, when you become very angry, or very frustrated, the ability to regulate these emotions is, for example, to turn the anger into something positive, something constructive, rather than become rage and behave in a destructive way. This is the regulation of emotion. And finally, there's the ability to see failures as a form of helpful feedbacks. You can learn from a crisis, and you can use it as a resource for future incidents.

The following figure adds several more aspects relevant to resilience at the individual level. Together, we see a broad spectrum of attributes required to maintain high level of personal resilience. Nonetheless, as a psychologist, I want to emphasize again that when we talk about resilience at the individual level, we have to remember that certain individuals are highly resilient, while other individuals may not be as resilient, or not resilient at all.



Community Level:

At the Community Level --

- The community's capacity to **function adequately** under threatening conditions.
- The ability of a community to **anticipate** risk, **limit** impact, and **bounce back** rapidly through **survival, adaptability, evolution, and growth** in the face of turbulent change.
- A community's **capacities, skills, and knowledge** that allow it to participate fully in the recovery of **its members** from disasters.

So now that we've talked about resilience at the individual level, let's move on to the community level. And here we move from the personality traits to social resilience. Let me start by a couple of very common definitions. The first one, for example, is the

community's capacity to function adequately under threatening conditions. This definition emphasizes the fact that resilience at the community level is simply the capability to continue with normal functioning. My Israeli colleague here, the military attaché, can tell you a lot about Israeli communities who were under continuous bombardments and artillery and missiles attacks, and while some communities showed high resilience and kept on functioning normally, other communities did not show that high resilience. Indeed, the level of resilience was measured simply by how well they managed to function: Did parents continue to send their kids to school? Did they keep the shops open? Did they continue to use public transportation? This definition, then, talks about resilience in terms of functioning.

Another definition emphasizes the ability of the community to anticipate risk or the crisis, to limit its impact and to **'bounce back'** rapidly – namely, not just to survive the crisis, but to adapt, to make progress and even to grow out the turbulent. We will come back to this 'bouncing back' term as we proceed.

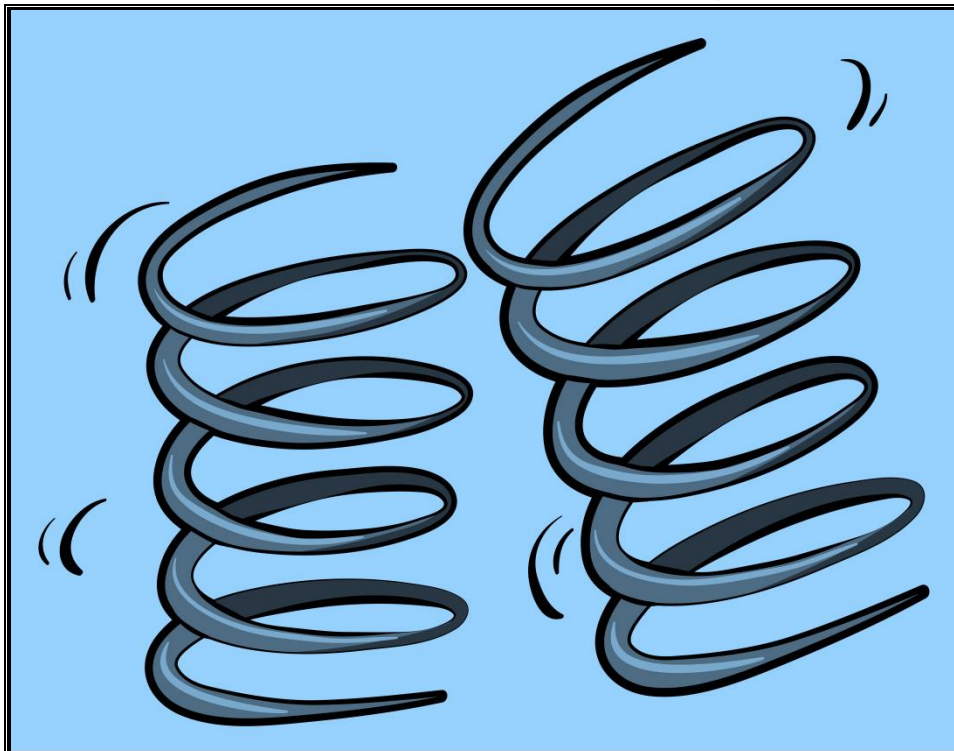
Social Resilience

- The capacity of a society to **prepare** itself, to **contain** and effectively **manage** major crises, to **react in accordance** with their severity and magnitude, and to **“bounce back”** expeditiously to an enhanced functioning.

Let's look at the above definition of social resilience. This is more a process definition that talks about resilience starting even before the crisis. It's the ability to anticipate, to see that something bad is going to happen and if you have the anticipatory ability then you can prepare the community to the forthcoming crisis. I know that my friend, Prof. Zeng, will talk later about preparedness to a crisis and how

do you prepare a community to it. So, social resilience at the community level (and also at the national level, as we'll see soon) can be seen not only when the crisis happens, when it already hit you, but it starts even before that, when individuals and communities can anticipate it and prepare for it. Then, if you do that, you can limit its impact so that it will not become so devastating and totally destructive, but it will be limited and manageable. Furthermore, managing the crisis means, actually, to react in accordance with the severity and magnitude of the disaster. At times, for example, managing adequately a disaster means simply to leave the area and look for a safer place. But then comes the phase that I like most, and this is the 'bouncing back' phase. The 'bouncing back' term is essential when dealing with resilience and we will see it again and again.

'Bounce back' expeditiously...



Bouncing back:

Bouncing back is the ability to bend after the blow, to withdraw for a while, to regress back for some time, even to run away from the dangerous zone -- but then to bounce back and get back to your former functional level, and sometimes even to a better and higher level of functioning. So the process has several phases: First you survive, then you adapt to it, then you have some evolution or progress and in the end you can even find yourself in a growth. The full process of community resilience is preparing yourself,

facing the crisis, adapting to it, and then overcoming it and if you are successful at that, then when you come out you are even stronger and better than when you entered it.

It sounds a little idealistic and perhaps something theoretical, but it's not. And believe me, I've seen communities that went through a terrible crisis and came out of it even stronger than they have been before. For example, this is what I sensed when I talked to my New York fellows, the New Yorkers, after the September 11th crisis. The **9/11** was a horrible crisis, but there was also a resilient process after that, and if you talk to Americans now, and especially to New Yorkers, many of them will tell you that they came out from this crisis even stronger than before.

Another definition, mentioned earlier, of resilience at the community level is "The community's capacities, skills and knowledge that allow it to participate fully in the recovery of its members from disaster". This kind of definition emphasizes the fact that the community serves mainly as a framework, or an infrastructure that enables its members to function during the crisis. Again, to use the **9/11** example, people talked a lot about the important role of New York' mayor during the days of that disaster, about the importance of the administration of the City of NY at the time. The city services and its leadership became the vehicle, the instrument, for the individual citizens of New York to help them overcome the personal trauma that they suffered during the Sept. 11th disaster.

Solidarity at the Community Level:

The sustained ability of a community to **utilize** available resources in order to **respond to**, **withstand**, and **recover** from adverse situations.

Still on the community level, another definition emphasizes the **solidarity** of the community, the collective power that the community has, the fact that when we all stand together as a group we have greater ability to sustain disasters than we have as single individuals. The relevant definition of 'solidarity' here is: *The sustained ability of a community to utilize available resources in order to respond to, withstand and recover from adverse situation.* It means not only that the many are more than the sum of all the individuals; it also means that the support that individuals can give each other within the community, is a critical inner source of resilience that helps the community. My colleague Prof. Maital, in his deliberation in the afternoon, will talk to you about one

of these internal resources which he frames as 'social capital'. 'Social capital' is one of those internal resources that the community can utilize in time of a disaster.

So, we may conclude that resilience at the community level, unlike individual resilience that is based mainly on personality traits, has to do with a **process** – preparation, adaptation, bouncing back, rebuilding itself and coming out as a stronger community. I will elaborate more about it in my next lecture, when I'll present the Israeli case study.

The national level:

At the National Level --

The **National-Social Resilience** is part of the national **strength** (or weakness), under a given **critical period**, as reflected in **behavioral** and **attitudinal** aspects, whether **pathological** or **salutogenical**.

So, with this, we move on to the national level. National resilience can be part of the national strength, but it can also be part of the national weakness. It can be presented, or demonstrated, either by pathological or salutogenical aspects. These terms call for clarification: **Pathological**, I guess everybody understands, is the term that refers to non-functional ways that the community or the whole society will exhibit at a time of a national crisis: protesting, demonstrating, stop functioning, leaving the country, deserting jobs and so on. **Salutogenical** behavior, on the other hand – 'salutogenic' comes from the word 'solution' and is used in the school of 'positive psychology' -- is a positive and constructive behavior. Salutogenical behavior is the kind of behavior that focuses on solutions, on continuing normal life in spite of disasters, on reopening institutes, keeping on functioning, developing through the crisis, and even becoming a stronger community. This is the salutogenical aspect.

DHS' Definition

Resilience is the ability of systems, infrastructures, government, business, and citizenry to **resist, absorb, and recover from - or adapt to** - an adverse occurrence that may cause harm, destruction, or loss of national significance.

U.S. Department of Homeland Security, Risk Steering Committee, Washington, DC, September 2008.

Following the September 11 attacks in 2001, the Department of Homeland Security was founded in the USA. The DHS is currently considered the leading authority in the world on resilience at the national and community levels.

According to the DHS's definition, resilience is the ability of systems, infrastructures, governments, businesses and citizenry (citizenry here means communities), to resist, to absorb and recover from, or adapt to, an adverse occurrence that may cause harm, destruction or loss of national significance. The DHS, being an American government agency that is in charge of resilience for the American people at large, expanded the definition to include not only communities, but also infrastructures, systems (such as transportation, electricity etc.), businesses and communities. Another important aspect here is relating to threats that *may cause harm, destruction or loss of national significance*. This means that national resilience refers not only to extreme threats to the nation's existence; rather, it means also keeping the nation's economy, education and other forms of national growth. So resilience is not just survival, it is much more than that.

National/Social Resilience --

A functional definition-

- A National / Social Resilience is defined as the **public readiness to face** a grand crisis, **without giving up** on national and strategic objectives.
- Demonstrated National-Resilience is defined as the ability of the **public to refrain** from imposing national **leaders** to make hasty or pre-matured **decisions** (e.g. either surrender to, or take radical measures against threats), at times of major crises.

In addition to the commonly used definitions, I've added myself two additional definitions, which I call 'functional definitions'. National-social resilience, from this point of view, is defined as *the public's readiness to face a grand crisis without giving up on national and strategic objectives*. This definition came up in Israel, during that period which I mentioned earlier, the *Intifada* -- a period, between 2000 and 2004, of repeated terrorist attacks – when the main goal during that period was simply to continue normal life and not give up on 'national and strategic objectives'. The national and strategic objectives were not necessarily military objectives. Just to keep the normal life. The resilience of the society in Israel was measured then not by its military strength or political position; rather, it was measured by the way the society managed to continue its normal life – outing, driving, shopping, dining and keep on doing these on and on.

There is another aspect of national resilience which I find very important. It is demonstrated by the ability of the **public to refrain** from imposing national **leaders** to make hasty or pre-matured **decisions** (e.g. either surrender to, or take radical measures against threats), at times of major crises. This is an interesting interplay between social resilience as exhibited by citizens, on the one hand, and decision-makers and national leadership, on the other hand. This leads to a very challenging question: Who's affecting whom? Does society affect the leadership, the decision-makers, or is the leadership affecting society's resilience? In the above definition I emphasize the point that a society that shows high level of resilience at a critical time

can help the leadership to adhere to a restrained and controlled policy without going into extreme decisions -- which sometimes can be devastating by themselves. This was exactly the situation in Israel in the early 2000's, at a period of frequent terrorist attacks.

What is NOT Included?

What is **not** included in these definitions?

- **Economic resilience** (GDP, State budget, unemployment rates etc.').
- **Political resilience** (government stability, public support in leadership etc.').
- **Military resilience.**

Let's recapitulate what we have learned so far. We learned that resilience is reflecting the ability of individuals, communities, nations or any other organizations to respond adequately to a severe crisis and to 'bounce back' successfully from such a crisis. We saw that resilience is exhibited somewhat differently among the three levels, or echelon categories -- individual, community and national levels. However, in all these three levels we focused on social resilience, that is -- on the psycho-social aspects of this phenomenon.

Now, let's talk a little bit about what is **not** included in social resilience. What are the other content-categories of resilience? Well, first of all, there is **Economic resilience**. Economic resilience, obviously, depends on economic factors such as the GDP (Gross Domestic Product) of the state, the state budget, unemployment rates, and economic growth.

Political resilience is reflected in the strength of the government, the political stability of the state and the public support and level of trust in the political leadership.

Finally, there is the **military resilience**, which is, simply, the strength and effectiveness of the military. Obviously' all three are interrelated and may have mutual impact. Further, one may assume that among the content-categories of resilience there are other types of resilience, such as cultural resilience, spiritual resilience, religious resilience, etc. However, we will focus today on the social resilience.

The Components of Resilience:

So far we talked about resilience using phenomenological descriptions. Now, let's try to explain what are the components of resilience? What makes a society highly-resilient, less resilient, or non-resilient? You may remember earlier when I talked about what makes an individual resilient – optimism, a positive attitude to life, meaningfulness and so on. What makes a nation resilient? What are the components of national resilience?

The Components of Resilience

- **Charismatic National Leadership (e.g. Mao Zedong, Franklin D. Roosevelt, Charles de Gaulle, Mannerheim, Churchill, Stalin)**
- **National Ethos (Shared values, a sense of common mutual destiny, unified national identity)**
- **Collective Fear (a threat perception that the nation's fate is in danger of extinction)**
- **Fight Enthusiasm (the willingness to fight; people's readiness to sustain any struggle)**
- **Collective Hope and Optimism.**

[Lewin, E. (2012). *National Resilience during War*. Lexington Books.

The literature on the subject is abundant. And not always consistent. I will rely on a study conducted by a colleague of mine, Dr. **Eyal Lewin**, as described in his book *National Resilience during War*. Obviously, his findings are biased toward war-related conditions, but in principle -- can also be generalized to many other crisis situations.

Well, the first component of national resilience, according to this study, is **leadership**, namely, the national figure that leads the nation at the time of the crisis. Typical names here are Churchill, de Gaulle, Roosevelt, Mannerheim and Stalin. I

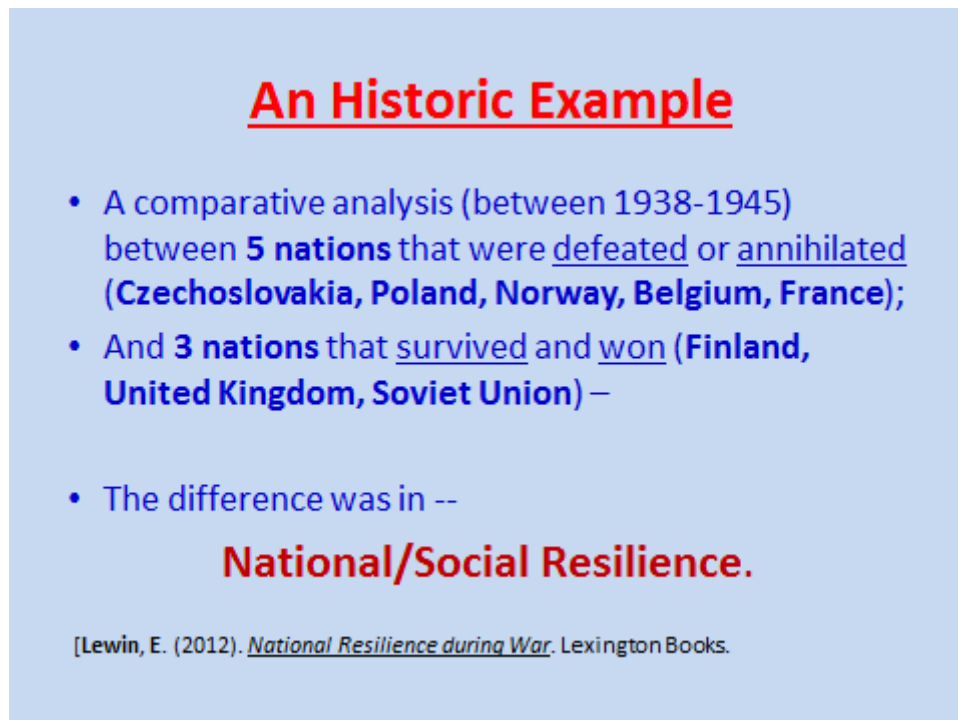
added the name of Chairman Mao Zedong as another example of a charismatic Leader. To a certain extent, the ability of the British people to sustain the stresses of the Battle of Britain, the Finish people to survive the Winter War, or the French people to withstand and recover from the German occupation of France -- these are all examples of national resilience and they were successful predominantly because of the leaders involved -- Churchill, Mannerheim and de Gaulle, respectively. Likewise, the roles played by FDR and Chairman Mao, as charismatic leaders of their nations, were crucial for the resilience of their people throughout prolonged periods of stress and strain that the USA and China went through at their times.

The second component of national resilience is the **National Ethos**. Beside leadership, every country has its ethos -- its culture, its core values, the sense of common mutual destiny, the unified national identity, the sense of togetherness. And as long as the country has this ethos of collectiveness and solidarity, its resilience is likely to stay high. Luckily, my home country, Israel, is characterized by a high level of such national ethos, and indeed usually shows high level of national resilience. The joke, however, in Israel goes that as long as we have threats of wars and terrorism we stay a very strong society and very resilient. Our most serious worry is what will happen when there will be peaceful times and no threats and no crises; we may then have a little less solidarity and the national ethos will play smaller role... -- what will happen then?

The third component is the **Collective Fear**. In fact, in order to demonstrate resilience you have to be threatened; you have to feel the threat of something bad that might happen to you. There must be a perception that the nation's fate is in danger of extinction. If you remember, Churchill in the early days of 2nd WW, he didn't call his people not to fear. Instead, he promised the British people "blood, toil, tears and sweat". Just troubles. It's the threat of the troubles bound to happen and the collective fear it arises that is needed in order to recruit your strength and resilience. And along with that comes the next component, the **fighting enthusiasm**. The enthusiasm to stand up, to fight back, to be ready to give all your abilities and even to sacrifice your life for that. The example of the people of NY City after Sept. 11 comes again to mind. In the days the 9/11 attacks people in New York used the words "let's nuke them." They meant the Iraqis, or Al-Qaeda, whoever was associated with the terrorists who attacked their home city. They expressed their readiness to go and fight against anyone, anywhere, at that time.

However, along with the collective fear and the fighting enthusiasm, you also need to have **Collective Hope and Optimism**. It's not enough to be enthusiastic about going on fighting; you have to have the sincere hope and trust that you're going to be successful. And it is the collective sense of hope that brings with it the resilience.

An Historical Example:



An Historic Example

- A comparative analysis (between 1938-1945) between **5 nations** that were defeated or annihilated (**Czechoslovakia, Poland, Norway, Belgium, France**);
- And **3 nations** that survived and won (**Finland, United Kingdom, Soviet Union**) –
- The difference was in --

National/Social Resilience.

[Lewin, E. (2012). *National Resilience during War*. Lexington Books.]

In the book I've mentioned earlier, *National Resilience during War*, the author compared two groups of nations during the 2nd WW. One group was comprised of **5 nations** that were either defeated or annihilated during the war: **Czechoslovakia, Poland, Norway, Belgium, and France**. These five nations either lost the war or became disintegrated. The other group was comprised of **3 nations** that survived and won the war, among them **Finland, United Kingdom, Soviet Union**. Finland was not one of the victorious countries in 2nd WW, but it won the Winter War, 1939-1940.

When Dr. Lewin compared these two groups, the 5 beaten nations, and the 3 winning nations, and was searching what was the main difference between the two groups -- well, you will not be surprised to hear that the difference was in the levels of National and Social Resilience. He looked at all those five characteristics of national resilience which we've mentioned: Leadership, national ethos, the collective fear, the fighting enthusiasm and the hope and optimism -- and he found that the nations in the first group were very poor on these measures, while the three nations in the second

group were all very high on these measures. National/Social resilience, than, is the factor that distinguishes between winning and losing nations during war times.

Summary and Conclusion:

Conclusions

- In order for a nation to sustain serious crises -- it must have **social resilience** at the **National** level.
- National/Social Resilience does not mean be unbending, or not changing; rather, it means to **withstand** and **manage** the crisis and then to **'bounce back'**.
- **Leadership** (among other factors) affects national resilience; but the resiliency of a **society** can also affect its leadership.
- National/Social Resilience can be **measured**.
- *This will be the subject of our next lecture.*

And with this we arrive at the last slide that brings the main **Conclusions** of our talk today. What can we learn from all of this? First of all, we learn that in order for a nation to deal with major crises -- it must have strong social resilience at the national level. Exactly like an individual needs resilience at the personal level, in order to survive.

Furthermore, national resilience does not mean remain unbending; rather, it means to withstand and manage the crisis and then to 'bounce back'. Sometimes this bouncing back may reach even improved levels of functioning.

We learned there are several major components, or factors, that comprise national resilience. While all these components are interrelated, leadership, in particular, can both affect national resilience, but can also be affected by the resiliency of a society.

Finally, we learned that national/social resilience can be measured. In our next lecture I will provide a detailed example of such measurement.

Discussion:

Audience:

The goal of resilience is to resume to a functioning society after natural or artificial disasters -- that is what I've learned. So, what I will talk about is a major contribution to build up a functioning society. So that's a bridge between your lecture and my expertise, thank you very much.

Reuven Gal:and I would like to draw on the point you've just made, that the crisis could be either 'natural' or 'artificial'. I would prefer call it "natural" versus "man-made" disasters. The former refer to events such as earthquakes, tsunamis, famine, hurricanes and so force. The latter include wars, terrorism, genocides, but also explosions (e.g. of nuclear power plants), or fires (conflagration). However, both cases create a threat to the functioning of the society and to people's lives. The resilience of society is the ability, the strength, of the society to continue functioning in face of such a disaster. Thank you for your comment.

Maital: Hundreds of years ago we had very small governments. When you have very small governments, people have to rely on their neighbors, on their friends and on their families; we now have very big governments. We expect governments to help us in times of fight, disasters, fires, explosions, war, famine... We expect governments to take action. We expect the government to prepare, to be ready. In New Orleans there was a huge hurricane and America has a federal agency management administration. They failed totally and the government was blamed – but that's beside the point. My question is: the fact that we have a government, with the responsibility to make us resilient, does that mean that we have – or need to have -- less social and individual resilience? Do we expect the government to do everything and solve our problems instead of being self-reliant and using our friends and family?

Reuven Gal: This is an excellent question and I'll give you my answer momentarily, but first I want to introduce a guest that we have here in the audience – this is Col. **Amir Eshel**, the military attaché at the Israeli Embassy in Beijing and formerly a senior officer at the Israeli Home Front Command. I'm sure he will be able to add to our discussion.

The responsibility of the national government does not free the local governments -- whether it's a city or a county, or even a small community -- from their own responsibilities. The same applies to the individuals. There are several reasons for

that: First, we know that in most disasters, especially natural disasters of great scale, during the first hours of the crisis, the only help and support available come from the individuals themselves and their close (literally so) relatives and neighbors. Secondly, as we've emphasized earlier, social resilience – unlike economic, military, or political resilience -- is not a matter of resources dominated by the central government, but rather relies on components such as solidarity, enthusiasm and hope. These assets are only found at the individual and communal level. Finally, even though the government controls the big resources, while the community and the local authorities have smaller resources – we need to remember that the strength of the community comes from the strength of its people and so is the strength of the society as a whole, as well as the State. It comes from the people. Many times it will be the mayor of a small city, or the charismatic leader of a certain neighborhood that will bring the people together, strengthen their trust and optimism and will spawn their resilience. So the government has its role, but it doesn't take away the responsibility from the local governments. Do you agree with that?

Audience: Yes, sir. I'm sure there's no way to divide responsibility. Each one has to make the most in its own level. But the other side of that is the question if you can train people to be resilient, because you have been saying all those things about the factors of resilience, but a community that lacks resilience -- how can you train them to be that? And I guess that if you already have that, it's much easier to maintain it.

Reuven Gal: This is an important question. I don't have the time now to elaborate (I'll talk more about it at my next lecture), but let me just say this: At the individual level, the question of whether we can train people to be more resilient is similar to the question 'can we train people to be leaders?' Well, some people say yes, other people say no, some people say: 'to an extent.' That's basically what you may also say about the resilience of individuals. One thing that is clearer is when one has had previous experiences. If the previous experience was successful -- in the sense of coping well and bouncing back well – than confronting a similar situation a second time may be from a higher level of resilience. The opposite is if the previous experience was unsuccessful, or traumatic. There were experimental attempts to conduct resilience training with soldiers (in the US Army, for example) – but the results and effectiveness of those trainings are quite debatable.

It is quite a different story at the community level. Here the resilience depends much on preparations, resources, earlier simulations or exercises etc. In short, it's easier to talk about training toward higher resilience at the community level.

Israel as a Case-Study in Resilience and Relevance for China.

Reuven Gal

Israel as a Case-Study in Resilience And Relevance for China.

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Presented at –

Resilience Workshop

Beijing, April 11, 2016

Israeli Case-Study:

Following my earlier lecture this morning about resilience in general, I would now like to present to you an Israeli case-study of social resilience at the national level and the way it was measured. I would like also to offer some suggestions -- and please pardon me for doing that -- as to how I think some of what I'm going to present here can be applied to China.

Background:

I need to open with some background information regarding the time in which this case-study happened. This is the period of time between the years 2000 and 2004. During those years Israel went through a horrifying experience that eventually received the name **The Second Intifada**. The word 'Intifada' in Arabic means, literally, "shaking off", but it is usually translated into English as "uprising", "resistance", or "rebellion". It is often used as a term for popular resistance to oppression. The Second Intifada is

also called the **Al-Aqsa Intifada**. The reason it is called the Second Intifada is because there was an earlier Intifada, back in 1987-88.

THE ISRAELI CASE-STUDY: THE SECOND INTIFADA (2000 – 2004)

- **Intifada** is an Arabic word which literally means "shaking off", though it is usually translated into English as "**uprising**", "**resistance**", or "**rebellion**". It is often used as a term for **popular resistance to oppression**.
- The **Second Intifada**, also known as the **Al-Aqsa Intifada**, was the second Palestinian uprising, a period of intensified Palestinian-Israeli violence, which began in late **September 2000** and continued in its intensive mode till the **end of 2004**.
- The **Intifada** was characterized by **frequent** (sometimes daily) **attacks**, conducted by Palestinian guerillas, in highly crowded civilian targets – **shopping-malls, restaurants, and public transportations**. Many of those attacks were carried out by **suicide bombers**. Most attacks resulted with many casualties. For example, in **March 2002**, more than 130 Israelis, mostly civilians, were killed in such attacks -- including one suicide attack at Park Hotel in Netanya, in which 30 civilians were killed while celebrating Passover.
- The **total death toll** on the Israeli side during that period amounted to **1100** deaths (including 64 foreigners). **2,124** Palestinian dead

The Second Intifada began in September 2000 and continued intensively till the end of 2004. So we are talking about a period of four years of continuous crisis. I emphasize this for two reasons: First, because there are many differences between a disastrous event that is brief and isolated and one that is protracted over a long period of time. Second, as I mentioned earlier, I look at resilience as a process that takes time. Time is a factor here.

Second Intifada:

The Intifada was characterized by frequent (sometimes even daily) attacks, conducted by Palestinian guerillas, usually in highly-crowded civilian targets, such as shopping-malls, restaurants, entertainment centers and public transportation. Many of those attacks were carried out by suicide bombers. Most attacks resulted in many casualties, both killed and wounded. For example, in March 2002, more than 130 Israelis were killed during that month. That included one specific attack, at the Park Hotel in the city of Netanya, in which 30 civilians were killed while celebrating the Passover. And so, every month, for 4 consecutive years, we had between ten to thirty -- sometimes more -- killed civilians, including men and women, children and elder

people, mostly Israelis, but occasionally also tourists. In addition, the number of wounded people was always 3 or 4 times higher. Many of the attacks were carried out by suicide bombers – terrorists carrying explosions around their body and exploding themselves either in buses, shopping centers, in the middle of a street, in hotels, and so on. The **total death toll** on the Israeli side during these years amounted to **1100** deaths (including 64 foreigners). There were also many casualties on the Palestinian side, almost twice as many, including the suicide bombers. So, the total death toll was above 3000 people, over a period of time of about four years, not soldiers killed on the battlefield, but mostly civilians -- men, women, children, senior citizens -- killed in broad daylight, in public centers. What a challenge to the national social resilience!

Now, the Israeli government at the time was very concerned as to how to respond to this protracted terror. The Prime Minister at that time was Ariel Sharon -- a charismatic and very powerful leader, also known to be quite bold in military operations. Surprisingly enough, however, he chose (and successfully persuaded the entire Israeli government) to choose a restrained policy, at least at the beginning of the Intifada period, with no overt military attacks on the Palestinians, but just to absorb the attacks and only to seek ways to help society to overcome the situation.

“How Long Can We Continue?”

At that period, early 2001, I was affiliated with the office of Israel's National Security Council (NSC), eventually assuming the position of deputy to the NSC's head, in charge of domestic policy, including national resilience. I remember one day I was called to a meeting with the PM. Mr. Sharon asked me a simple question: "how long, do you think, can we (the Government) continue with this restraint policy – before we'll reach total chaos, before the society will start either to rebel, or people will just pack up and leave the country?" Mr. Sharon knew my academic background as a social psychologist and he rephrased his question: "how strong is our society?" I told him he was actually asking about national-social resilience, and promised at least a partial answer, with some measures of that strength, within a week or two. And that's what I did.

Ways of measurement: Cross section of three dimensions

- **Situational database:** Terror attacks (suicidal attacks, casualties, wounded), between October 2000 and December 2003 (the *Intifadah*), on a monthly basis.
- **Measuring public behavior**, on a monthly basis, with regard to distress calls, consumption, E-R admittance, recreation activities, crime rates, use of public transportation, etc.
- **Measuring public attitudes**, with regard to mood and morale, sense of security, fear of death -- with comparisons to previous surveys.

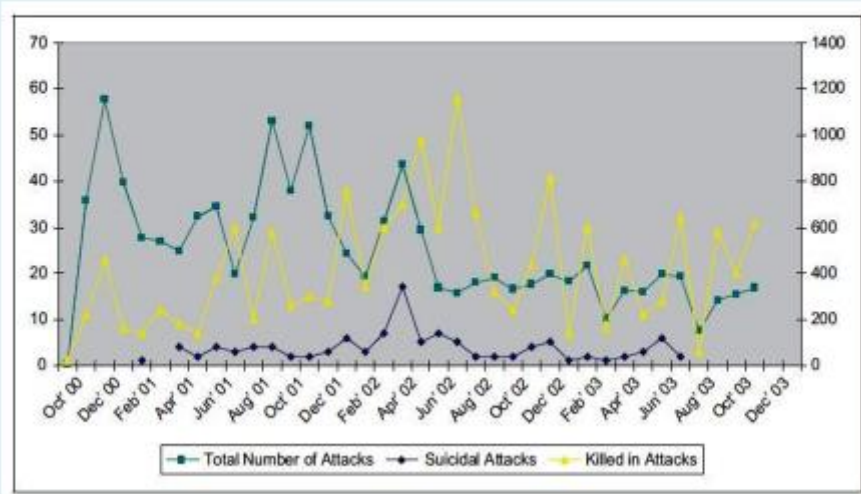
Measuring Resilience:¹

The way to do it was to generate a compilation of three measurements: The first one was the basic data related to the terror attacks – the number of suicide attacks, of casualties, and of wounded, between October 2000 and December 2003², on a monthly base.

¹ The following eight figures (with numerical data) are taken from a previously published paper. See: Gal, R. Social Resilience in Times of Protracted Crises: An Israeli Case Study. *Armed Forces and Society*, 2014, 40(3), 452 - 475.

² At the time, I could only collect data from October 2000 to October 2001. The present data was collected more than two years later, in order to complete this study.

Situational database: Terror attacks (suicidal attacks, casualties, wounded), between October 2000 and December 2003

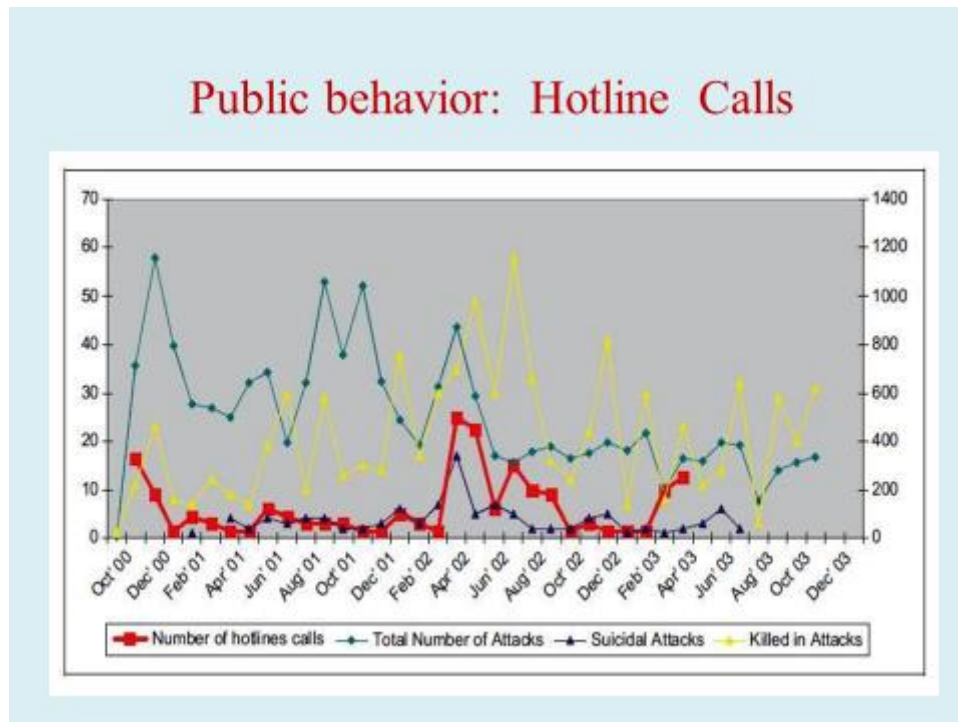


In: Gal, R. Social Resilience in Times of Protracted Crises: An Israeli Case Study. *Armed Forces and Society*, 2014, 40(3), 452 - 475. The second group of measures had to do with the public's behavior during those same months. As I have indicated earlier, in my previous speech, national resilience reflects the ability of the public to continue to function normally, in spite of the daily threats. The behavioral measures we collected were indications of public's normal functioning. They included rates of use of public transportation, frequency of cinema-theaters' attendance, frequency of hot-line calls and Emergency Room admittance, crime rates etc.

And the third group of measures was that of public attitudes with regard to mood and morale, sense of security, fear of death, and subjective level of well-being. We managed to compare the findings during the Intifada period to parallel findings a year or two before, thus providing a kind of a base-line.

Let's see now how it looks. In the next few slides, the exact same data regarding the terror attacks and the resulting casualties will appear, monthly. Superimposed on these figures you will see, in red, the public-behavioral indices we collected, again month-by-month.

Hotline Calls:

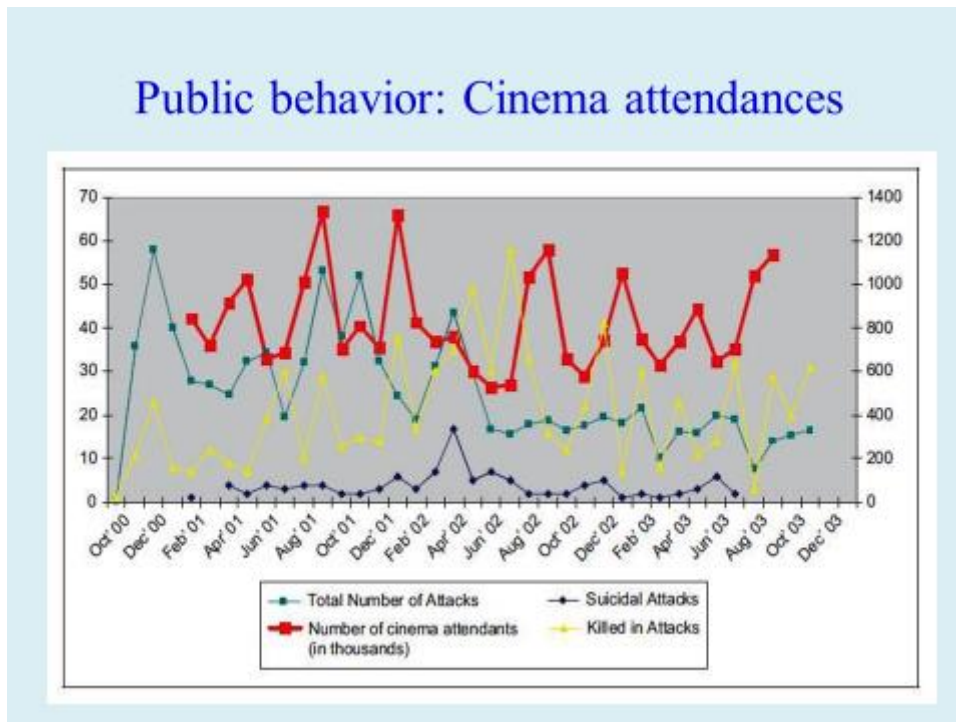


In: Gal, R. Social Resilience in Times of Protracted Crises: An Israeli Case Study. [Armed Forces](#)

We have in Israel – as I'm sure you have here, a system where you can call a free number, like 111 or 552, and you can talk about your fears, your emotions, your panic reactions and so on. Usually, a trained person will answer you and will try to calm you down and advise you what to do.

Using zero as the baseline, you can see that the use of those hotlines at the beginning of the Intifada went up to a very high level. Then, after a while, it went down again and stayed like this for most of the first year. Around March and April 2002 -- these were, as I've mentioned before, especially bloody months -- there was a sharp increase again, followed by several fluctuations, like 'bouncing' up and down again and again.

Cinema Attendance:



In: Gal, R. Social Resilience in Times of Protracted Crises: An Israeli Case Study. [Armed Forces](#)

This is an even better example of this 'bouncing' up and down phenomenon. Using the monthly reports of the Israeli Association of Cinema Owners in Israel, we found this remarkable pattern, that every time after an attack there was a drop in cinema attendance, but then two or three days later, if there was no lethal event, the cinema theaters were full again. Even after the horrible spring months of 2002, when the decrease in cinema attendance was the greatest and longest – there was a sharp increase again and numbers returned back to their higher levels.

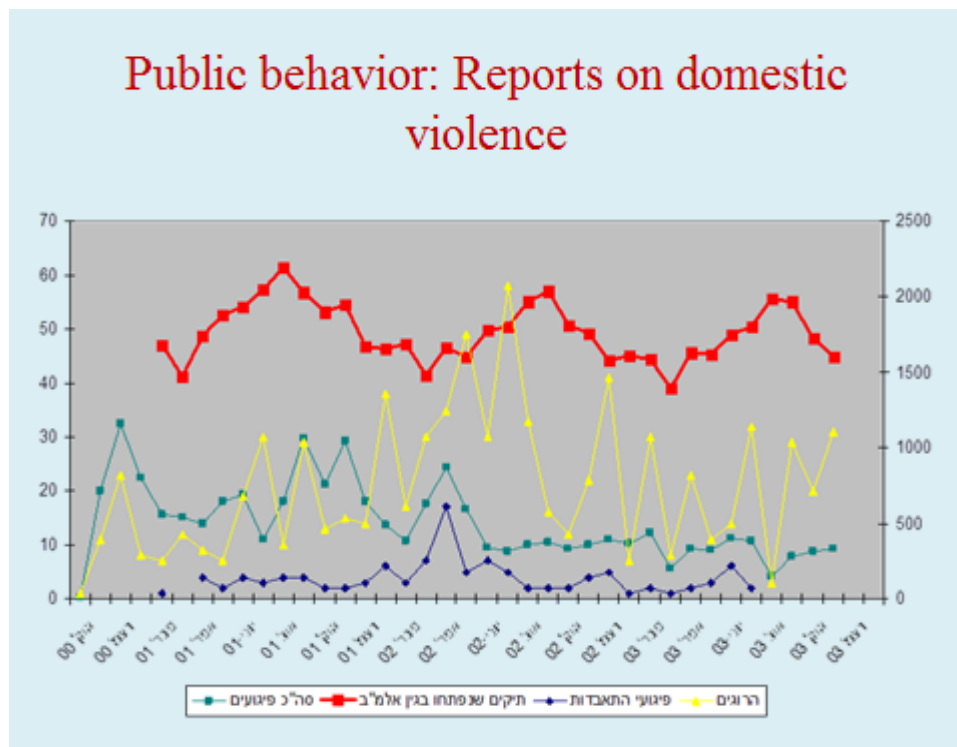
Even more remarkable is the fact that when we calculated the over-all average of these fluctuations across time, we could conclude that there was no change in people's behavior. In fact, the trend of cinema attendance over the three years of terror showed a slight upturn.

Now, I'm not claiming that going to the cinema is the ultimate indication of normal life; but it is an indication of maintaining routine life. That's what you do if you don't panic. So, if we talk about resilience as 'the ability to continue functioning even under difficult conditions' -- this is what you see here. It's to continue functioning, every time to withdraw a little bit when necessary, but then go back to normal life. This is literally the 'bouncing back' phenomenon we talked about earlier.

Q: We did have quite similar phenomena, where we found high frequency of cinema visits during crises. It happened in China, it probably happened in the US as well.

Reuven: I guess you are talking about going to the movies as a way of distraction and enjoyment during difficult times. True. This can be a way of avoiding constant thoughts about an impending threat. However, you have to remember that in the Israeli case, it was exactly in those cinema centers that many of the terror attacks took place. In addition, the average cinema attendance before the Intifada was not lower; it was just more stable – compared to the fluctuations during the Intifada period.

Domestic Violence:



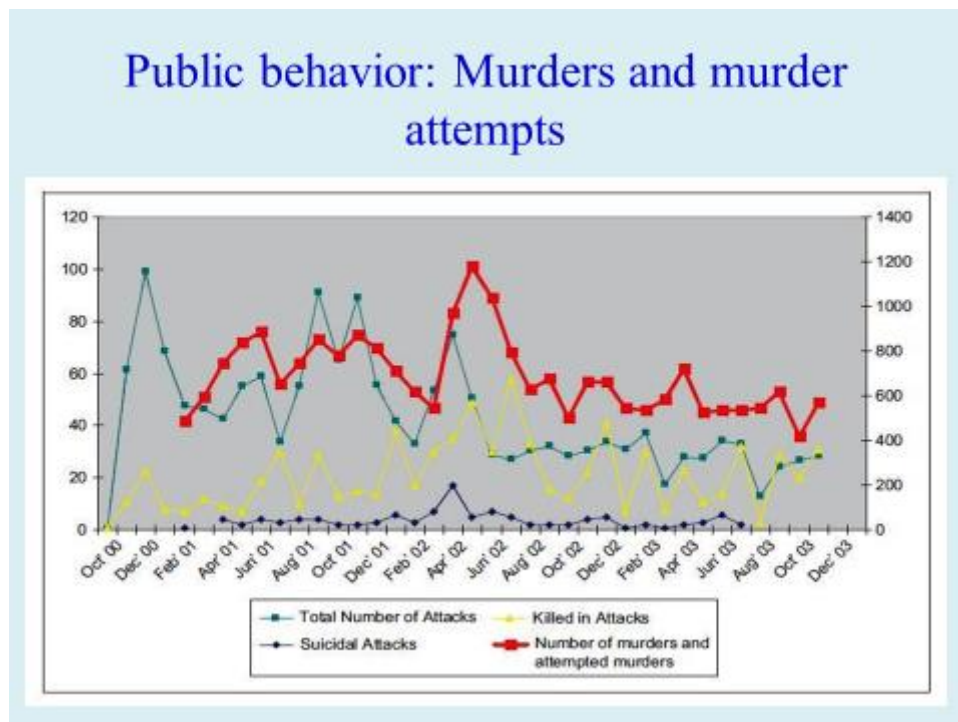
In: Gal, R. Social Resilience in Times of Protracted Crises: An Israeli Case Study. Armed Forces

Another example of resilience assessment has to do with rates of domestic violence. There are many studies showing that in times of war and terrorism, when the situation is highly chaotic and there is a high prevalence of killing and violence in the streets -- there is also an increase in domestic violence.

So we looked at rates of domestic violence among Israeli families throughout the Intifada period -- and once again we came across the same phenomena of bouncing

up and down again, with no significant change in average rates over time. In fact, we found that these fluctuations had no direct relationship to the terror attacks; rather, they were in correlation with the seasons of the year: high rates during the hot summer months, followed by a clear decline as the fall and winter months arrive. Thus, if rates of domestic violence were presumed to reflect levels of national-social resilience – they did not; all they reflected were the effects of climate changes.

Murders and Murder Attempts:



In: Gal, R. Social Resilience in Times of Protracted Crises: An Israeli Case Study. Armed Forces

A further attempt was made to look not at cases of violence in general, but into more specific and extreme criminal behavior, such as rates of actual murders and murder attempts. Again, we know from studies in criminology that during war time crime rates rise, especially murders and murder attempts. Here we found that the fluctuations followed, to some extent, the fluctuations in the frequencies of the terror attacks, especially around the bloody period of spring 2002. But even that distinct elevation returned back down to a level that was similar to (and even below) the level of these crimes at the beginning of the Intifada. On average, then, rates of murders and murder attempts did not show any indication of corrosion in Israelis' level of resilience

We had several more behavioral indices that we measured -- such as use of public transportation, admittance into emergency rooms in hospitals, rates of various recreation activities and so forth. We have not included them here because of the limited time. Evidently, the same pattern persisted in all those measures: there was a temporal withdrawal immediately after a terror event and a 'bounce back' at some point later. In all the indices, the over-time average did not show deterioration in "normal" behavior.

Measuring the Attitudinal Component:

Measuring the attitudinal component

- A comprehensive survey was conducted in November 2003.
- The survey population was defined as "the entire Israeli population over 15 years old".
- From this population, a representative sample of 700 individuals was surveyed (telephone poll).
- A comparative analysis of the data, in relation to previous surveys since 1998, was conducted.

In: Gal, R. Social Resilience in Times of Protracted Crises: An Israeli Case Study. Armed Forces

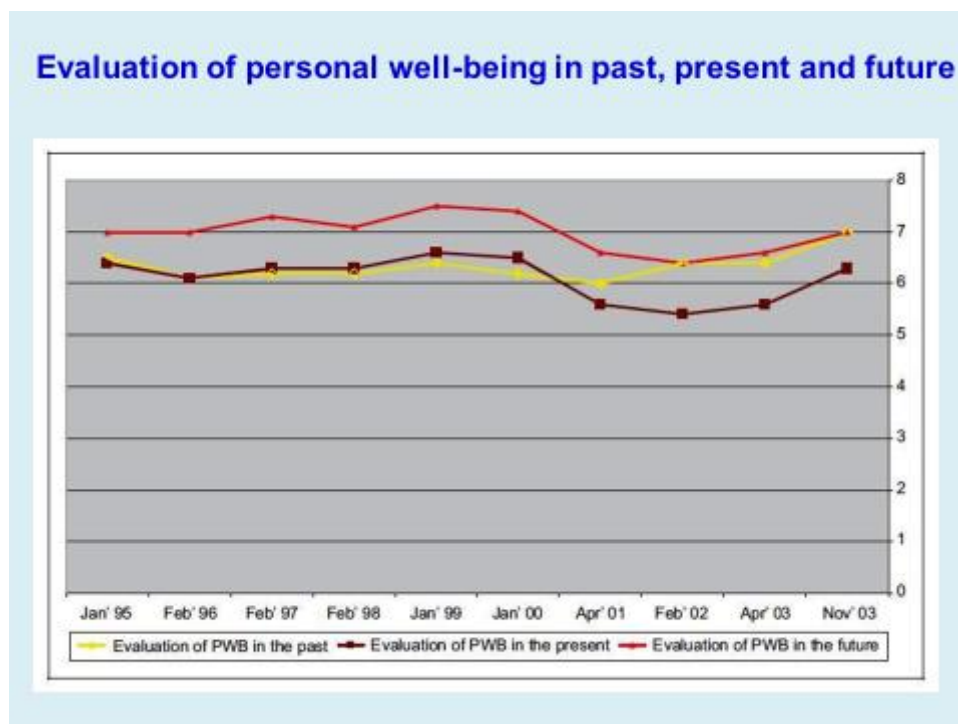
Toward the end of the Intifada (though without knowing it was ending), we (the NSC) initiated a survey aiming at measuring public's attitudes regarding the Intifada and its impact. While the survey was administered in November 2003, it was constructed basically on the same items used in regular surveys conducted in Israel in previous years, and indeed enabled us comparing the results over time.

The surveyed population was defined as "The entire Israeli population (both Jews and Arabs) over 15 years old", and from this population, we took a sample of 700 individuals. Israel is small enough, so a sample of 700 is considered to be statistically

representative. As mentioned earlier, we used identical items to compare findings from previous years, on similar samples.

Evaluation of Personal Wellbeing:

Here is one example from the survey. The question here had to do with a sense of personal well-being. It was phrased very simply: "How secure and how well do you feel in everyday life?" The answers could range from 1 ("I feel very scared and bad") to 8 ("I feel very secure and positive"). Further, the respondents were asked to answer this question in reference to three time periods -- the present, past and future.



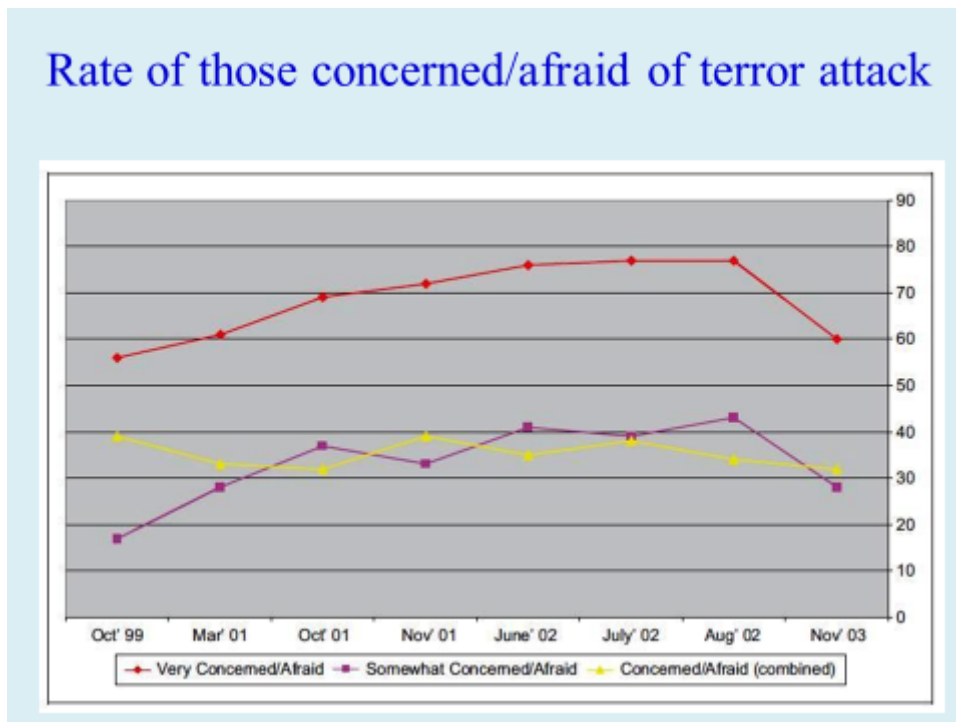
In: Gal, R. Social Resilience in Times of Protracted Crises: An Israeli Case Study. Armed Forces

While the average levels of Israelis' well-being, based on their own subjective reports, are definitely high, especially with regard to future projections, you can see a clear falloff in these levels following the beginning of the Intifada (mid-2000), especially with regard to present and future evaluations (there is a slight tendency to "glorify" the past levels of personal well-being...). However, around the middle of 2002 we started to see a 'bounce back': the average levels of citizens' well-being started to rise again, to the point that by November 2003, it reached a very similar level as it was almost 10 year earlier, in January 1995.

I believe that this finding is quite surprising, certainly it cannot be taken for granted. Here, at this point, in November 2003, you have a whole society that has been confronting, for more than three years, everyday bombing and killing and casualties in their home towns; and yet when asked how secure they feel, they answer, on average, "I feel quite secure and positive" -- pretty much the same answer they gave several years back, when no such terror events happened daily.

Fear of Terror Attacks:

Another example of measuring attitudinal aspects of the public's resilience is asking about people's fear or concern. The question here was, again, very simple: "To what extent are you afraid/concerned³ of the terror attacks?"



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As you can see, the level of fear increased significantly from the period before the outbreak of the Intifada (as in October 1999) to the following months of the repeated terror attacks. Surprisingly, however, in the November 2003 survey Israelis recovered back to a level of fear that was quite close to peacetime level.

³ The Hebrew verb (פחד) refers to both.

Q: What is the reason that they bounced back, is it because the attacks were less frequent?

Reuven: No, the attacks continued until the end of 2004, although at a somewhat lower frequency, as shown in one of the earlier slides. There was also a military operation, initiated by the Israeli Government, which took place in April 2002, against the Palestinian guerillas in Gaza and in the West Bank. But the attacks did not end. The suicide bombers did not stop, nor did the casualties.

If you're asking me why the fear reactions bounced back to their 'normal' level after three years of continuous terror, I can give you my own psychological explanation. When you have a single crisis, like 9/11 attacks in the USA⁴, or the Yom Kippur War in Israel⁵ -- a sudden disaster, with no preparation and an awful impact -- people are shocked and they react in panic and show high levels of anxiety. This is where you see very high levels of fear and concern. However, if this crisis continues on and on, day after day, and it persists for 3-4 years, as the Intifada did -- along with the growing sense (and consensus) that there was no easy and fast solution to the suicide-bombing tactics -- then there is a transformation in the public mind-set. The people's reactions change from the **"single-sudden disaster" mode** to what I call the **"traffic accidents" mode**. As you know, people don't stop driving on the roads with their cars even though there are daily traffic accidents with fatal casualties. In Israel, the number of people killed on the roads in car accidents throughout the years is much higher than the total number of people killed by terrorism and wars, combined, over the years. Yet, people continue driving, buying more cars, allowing their kids to get driving licenses...

The *"traffic accidents"* mode implies a sense of an uncontrolled, almost unavoidable impending adversity. You can't fight it, you definitely can't join it -- you can only adapt to it, cope with it and get through it. As with traffic accidents, you learn how to live with it. One of my colleagues suggested here the relevance of Max Weber's concept of "routinization of everyday life"⁶, spontaneously evolving after a collective upheaval. In the *"traffic accidents"* mode individuals return in their everyday life back to their routine patterns, because they begin to see the adversity as inescapable. I admit that this

⁴ September 2001. The attacks killed 2,996 people and injured over 6,000 others and caused about \$3 trillion in total costs.

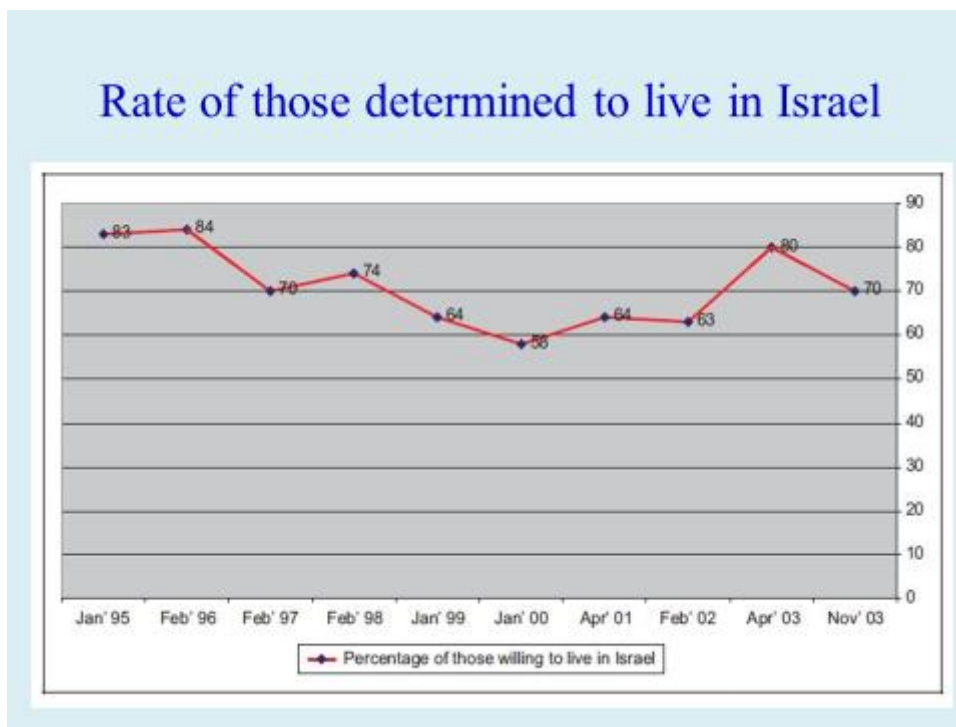
⁵ October 1973. Lasted for 19 days and ended with 2,600 soldiers killed in action and additional 8,000 soldiers were wounded. Some 293 Israelis were captured as POW's.

⁶ Weber, Max. 1946. "Bureaucracy." Pp. 196-244. In: H. H. Gerth and C. Wright Mills (Translated and Edited), *From Max Weber: Essays in Sociology*. New York: Oxford University Press.

hypothesis is only mine and was never examined methodically. Obviously, it requires further research.

Anyways, I believe that after three years of continuous terror attacks, people in Israel adapted to it, as they do, for years, to traffic accidents, and they bounced back to their normal routine. For me, this is the explanation.

Determination to live in Israel:



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Let me show you just one more example. In Israel, patriotism is reflected, among other things, in the intention not to leave the country; to live in Israel. Israelis, in general, have the option to leave the country and move abroad. This option becomes very tempting at times of danger and stress, as the Intifada period certainly was. And so, the question here was: "To what extent are you determined to live (i.e. to stay) in Israel?" In other words, how intense is your patriotism?

As you can see, during the years before the Intifada, 1995 to 2000, there was a general decline in the number of Israelis who were determined to stay in Israel. The strange thing here is that starting in January 2000 and through the Intifada years, there was a slow (and one time even a big) elevation in this determination to stay in Israel.

In fact, the level of determination to live in Israel (and, reasonably, the level of patriotism) reached during the Intifada period a level even higher than it was in the preceding years, which were considered to be good years, economically and otherwise.

Put it in other words, the average Israeli citizen, facing this protracted terrorism, declared: "In spite of all these terror attacks, I'm determined to stay in my country and continue to keep up my daily routines -- go to work, visit the cinema theaters, use public transportation, send my kids to school -- in short, continue my life in Israel, no matter what".

Summary and Conclusion:

Summary of findings

- After three hard years of Intifada, the public's behavior was, generally, normative.
- The public reacted immediately to the harsh events, shielded itself against them, and returned quite quickly back to its life routine ("Bouncing Back").
- Moreover, even if the public admitted the difficult situation of the state -- the future perception (as reflected in people's attitudes) is positive and optimistic and the level of patriotism remained relatively stable and even stronger.

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And so, the conclusions we arrived at, at the end of this study, were those presented in the above slide. The Israeli public demonstrated, in general, high level of national-social resilience. The fluctuations in their behavior were consistent with the insecure reality throughout that period and in fact exhibited the "bouncing back" pattern, so characteristic of resilient behavior. Furthermore, in spite of periodical signs of distress and fear, their level of patriotism remained stable or even strengthened.

Summary of findings (Cont')

- The public demonstrated **readiness to face** the prolonged crisis, **without giving up** on national and strategic objectives, nor on 'normal life'.
- As such, the public enabled the **political leadership** to pursue its decision-makings and showed its ability **to refrain** from imposing national **leaders** to make hasty or pre-matured **decisions**

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We have also concluded that throughout the long months of the Intifada the public demonstrated readiness to face the crisis, without giving up on national and strategic objectives (such as high rates of absence from work, moving out of the country in excessive amounts etc.), nor on 'normal life'.

And, in doing so, the public enabled the political leadership to pursue its decision-makings and showed its ability to refrain from imposing on national leaders to make hasty or pre-matured decisions. Remember? That was one of the definitions that I used for national resilience. The high level of resilience that the Israeli society showed throughout that period enabled Sharon's government to maintain its restraint policy against the Palestinian people.

Several examples for possible Chinese applications:

Let me move now to the next part of my lecture, in which I will try to propose several examples for possible applications, within the Chinese context, of the resilience definitions and measurements used in Israel, which I've just now presented. I ask your pardon in advance, if these examples may not be the most adequate ones, because I'm not an expert on China, and I certainly do not assume myself to be in a position to offer you advice or guidelines. So please take the following slides with a grain of salt. As you would expect, I did not stick to the same kind of threat that was central in my

presentation, namely terrorism, but instead I focused on three types of threats that you here, in China, are struggling with and which require national-social resilience: environmental pollution, food safety, and healthcare.

Environmental Pollution:

Let's start with environmental pollution -- a constant and serious hazard, which the Chinese people are struggling with and obviously requires resilience at the national level. What kind of measures can be used in order to assess the level of national resilience against environmental pollution?

Pollution in Beijing

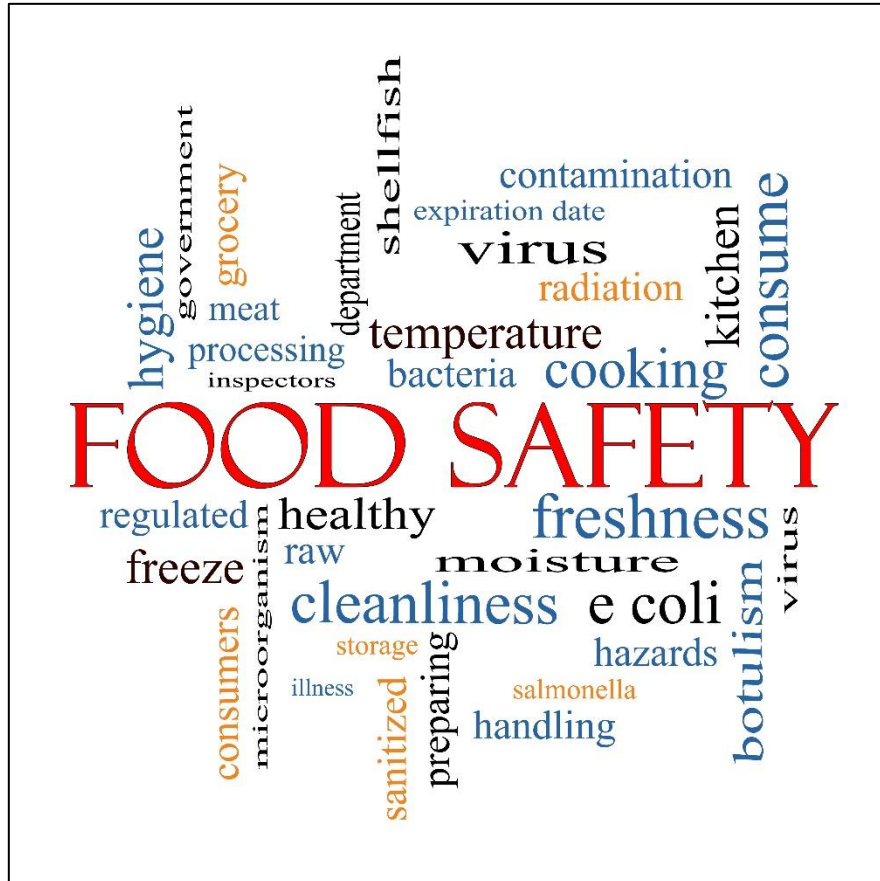


At the behavioral level, one may think of changes in the rates of 'morning Tai Chi', or any other physical activities taking place at open public places -- as indicators of resilience toward pollution. There are other behavioral patterns reflecting sensitivity to environment or to minimize pollution – such as using air purifiers, use of plastic bags, recycling etc. Monitoring vacillations over time in the rates of such behaviors can also indicate changes in public resilience. Finally, changes in citizens' motivation to engage in voluntary activities related to environmental hazards may become a reflection of their resilience toward such hazards.

There are also attitudinal measures, such as the levels of support expressed by citizens toward authorities' instructions regarding environmental issues, or the rates

of citizens willing to leave the country because of their concerns regarding environmental hazards. I am not sure how correct I am about the application of these measures in the current reality of your country. But it may give you some directions for developing appropriate measures of resilience at the national level.

Food Safety:



Food hazards are another source of threat to national resilience. I found out on the internet, there were numerous food scandals in China in the last 10 years, some of which ended with the death of babies, or even adults, both in China and on some occasions also in other countries importing food products from China⁷. Apparently, even under the current political conditions in China, such scandals generate public reactions, including several cases of filing writs or petitions against the responsible companies. The extent of such complaints or petitions, whether they increase over time or not is an indicator of public's resilience to this kind of threat. So is the public's preference to buy imported food products or dining out.

⁷ See: https://en.wikipedia.org/wiki/Food_safety_incidents_in_China#Food_safety_incidents_in_2003

On the attitudinal spectrum, the public resilience may be assessed, for example, by monitoring changes in expressed fear or concern about food products and food services.

Health Care:

My final example has to do with health care. The examples I had in mind here, which could demonstrate national/social resilience, were: Rates of use of medical devices; acquiring commercial health-insurance (mostly non-governmental or private health insurance); utilizing traditional Chinese medicine; and, travelling abroad for medical treatment. Regarding the latter example, In Israel, we have a phenomenon that people from other countries, mainly from Russia, come for treatments of all sorts to our hospitals, because they don't trust their own hospitals. An indirect indication of low resilience at home.

On the attitudinal level, we propose measuring the level of trust in governmental health reforms (such as the "Healthy China 2020"⁸).

In sum, the above are some examples of measurements of national resilience which you may consider in your country *vis-à-vis* existing threats. As I said before, I apologize if they are not very adequate.

Questions for Discussion:

Questions and Discussion

- Is national resilience *vis-à-vis* **social instability** the same as national resilience in face of **security threats**?
- What are the relevant **measurements** of national resilience *vis-à-vis* **social instability**?
- What is the role of **national resilience** in affecting **leadership**?
- What is the role of **leadership** in affecting **national resilience**?

⁸ See: [Norton Rose Fulbright-China new healthcare reform 2020](#)

I will present this slide to you with four questions for further discussion:

- First of all, Is national resilience in face of social instability, like pollution and health concerns and food safety -- is it the same thing as national resilience in face of security threats and terrorism? Are we talking about the same thing? Is the resilience in China against its domestic troubles, the same as the resilience in Israel against terrorism?
- Second, what are the relevant measurements of national resilience *vis-à-vis* social instability? Are the examples I gave relevant? Can you come up with other ideas?
- And then come the questions about leadership. What is the role of national resilience in affecting leadership? How does the Chinese society, the Chinese people, influence the leadership (political leadership, party leadership) in China? And at the same time, in the other direction --
- What is the role of leadership in affecting national resilience? Which direction has more influence?

And with that I open the floor to your comments, questions and answers.

Q: I just want to make one observation. It's fine to say national resilience and measuring it like that, after or while the emergency situation occurs, but unless you have a baseline, unless you established your baseline before, in terms of your statistics, you have no measuring ability. So that's something you should think about .

Reuven: Very good point. Obviously, you need a baseline, taken during 'normal' times, to be compared to the measures during the critical period. In the attitudinal section of my presentation, I showed data that was accumulated years before the Intifada. Similarly, in our analyses related to public behavior we also had baseline rates in most cases. What I've presented to you today was only segments of the entire analyses.

Shlomo: I want to ask you a practical question. My wife is a school psychologist, and regularly, school psychologist and the other people on the school system, are responsible for school emergency assistance. They do exercises; they practice drills, dealing with an emergency. So the question is for the people here from China, but also for Col. Amir Eshel, the Israeli military attaché, who is here with us. In the military, they always have a set of contingency plans. If somebody attacks your country and then you start to figure out what to do -- it's too late. So all military groups have contingency plans. I'm wondering if China has a set of contingency plans, what to do

in a case of flood, fire, any kind of disaster. I also wonder if Col. Amir could tell us a bit about such contingency plans in Israel. Do we have such plans for bad things that may happen?

The Israeli case -- from a military perspective.

**Col. Amir Eshel, Israeli Military Attaché in Beijing,
Formerly Chief of Operations, Homeland Front Command, IDF**

Looking for ways to improve our community resilience:

Try to visualize this picture in your mind: An old lady running in the street without knowing what to do, the area is under attack and she is screaming. A picture like that, taken in one of the cities in Israel, was broadcasted live on television and caused fear and confusion. This is a bad example that we use when we're looking for ways to improve our community resilience. People not knowing what to do, who don't know how to deal with the situation -- have very little resilience. Using that point on we try to build a different picture, we try to control the information that goes out to the media and try to eliminate, as much as we can, the singular person dealing with the situation not knowing what to do.

The first thing that we want to provide is a valid solution at the personal level. You need to take responsibility, to prepare your home and family, you need to learn new things and train yourself but there is a solution. There's no situation that is a "dead end". And while taking responsibility is not 100% proof, it will give a very good chance to survive any emergency situation.

99% is done before the actual disaster:

We teach our citizens and we teach ourselves that more than 99% of saving life is being done before the actual disaster occurs. If you prepare in advance, if you train the people, you have more chances of saving lives, the end result depends more about the things that you do before the event and less about the things you do during the event. For example, regarding earthquakes, we know that saving life after an earthquake happened is very hard and usually in small number. Even with large forces for such a search and rescue mission, you'll have only 24 hours to save people buried under the rubbles. After that, there is a small chance of finding living people. Because deploying professional forces to the affected area within 24 hours is very difficult, we try to train local personnel for light search and rescue missions. The locals will have an immediate effect with very simple procedures and simple resources. Furthermore: most of life saving can be done if you prepare before. New laws for stronger constructions, different kinds of procedures, training, database, logistic operations, and

things like that. If you use the time well before the disastrous event, you'll be able to save lives.

The Importance of training: national-level training.

In Israel, we have established a very enhanced training program for different levels: from the personal level and up to the regional government level. Once a year we have a national-level training at all levels, up to the government offices. The National Training is a significant opportunity to check national-level scenarios that strike large communities.

Personal level training - teach taking responsibility:

First of all, we try to teach any single citizen to take responsibility, to prepare himself and herself for an emergency. The major part of that is being done through schools. We use the children to deliver the message to their parents, because parents are much harder to train. But if we teach the children, in emergency time the children will tell their parent "we just learned in school that we should be ready with this kind of equipment, that we should prepare a room for emergency time" and so on. The children are actually teaching their parents what to do in order to prepare for emergency time. And we teach the children in a few phases during school. The first time we teach them is in 2nd grade, so that children around 7-8 years old are already messengers. And after that, in the 5th grade, and in high school, we continue with these trainings. Through this procedure we teach them elementary preparedness at the personal level, we teach them the sense of responsibility and we teach them the sense of being part of the community and how to support the community. High-school students have a second duty -- to support weak populations, like old or disabled people. All the institutes that need support during emergency are mapped. Those which are near a high school -- that school will get the responsibility to support them during emergency time. The connection between the strong and weak communities makes the population more cohesive and reduces stress. Looking at the personal level, any young man or woman has to be active, not passive, each one has a duty. At the age of 18, when joining the army, the young soldiers have already been through learning and training and that makes their adaptation to the military service much easier.

Training systems for Government offices:

The I.D.F is one of the most respected organizations in Israel, with high credibility for its professional achievements. Because of that, the government decided that the training of all the government's offices will be the responsibility of the Ministry of Defense. Following that decision, the I.D.F prepared a training program for all the civilian authorities who take part in emergency situations. The Home Front Command (HFC) has a special unit that is in charge of the medical training. This unit will prepare a 3-year program for the hospitals, including different scenario and medical challenges. The different scenarios start from natural disasters, chemical and biological weapons attack, and up to the level of direct attack against the medical facility itself, in war. Each one of the medical facilities has a specific scenario regarding the position and level of attack that is expected in the area. The same goes for regional governments. The HFC, through its territorial's divisions, is in charge of training and preparing the local leaders and their staff. The HFC will dictate a specific scenario for the regional government to complete in a 3 year training program and will lead the actual training on ground. There are more training programs like that for Critical Infrastructures such as schools, public centers and special local security forces. The 3-year training program gives the trainees the opportunity to be able to practice the tactical and operational level. By the end of this circle of training, the leaders of the different organizations should be able to take responsibility for their own missions in real-time situations.

Following the training program, the HFC will provide a detailed feedback and lessons-learned from the different exercises. The last step will be to estimate, by numerical scores, the performance of the different organizations, as compared to other parallel organizations. The total table of scores is published openly and usually takes the news headlines, meaning that there is a great motivation to perform well in trainings.

Operational Procedures Manuals:

The HFC is in charge of writing the Operational Procedures Manuals for all the organizations who train under his command. The manual will guide the leader how to build his organization for emergency situations. The manual will give guidelines how to prepare a city for emergency, how to organize the public shelters, what is the necessary level of supplies that the city should hold in storage and other issues like that. The trainers from the HFC will work with the leaders of the city to establish a sustainable program for the city for training and for activities. In a period of three years, every mayor and every community leader will have the opportunity to attend training, and then he will not have any excuses for not being well prepared for emergency.

National Exercise:

Every year, the State of Israel conducts a national-level exercise in order to train all the military forces and the civilian forces for a combined operation in emergency time. Prior to this exercise, throughout the year, every organization will conduct its own training, following the goals that had been set in advance. And then, for one week, all the organizations combine their training in order to check the coordination and the combined activities. Major participants in the exercise are the I.D.F (military), the Police forces, the Fire fighters, the Medical forces and the Authority of Critical Infrastructures. The training usually will combine a phase for the general HQ's to check their procedures and resources for emergency; and a second phase for the lower-level first responders, in order to check their performance and proficiency.

Leadership:

The basic state of the population in emergency time is a mixture of fear, uncertainty and confusion. This is why leaders are so critical – they are the ones to provide a sense of hope and security to their citizens. Some of the leaders are naturally born, but others may need some help to find the way to operate well. There are different ways where the HFC supports regional leaders. First, the full program of training is aimed to reduce the fear from the unknown and make the emergency situation more familiar; Second, assigning an HFC officer as an assistant to the leader provides the leader with a better assessment of the situation and generates more trust and confidence from the people on the street; Third, local leader are visited frequently by senior military officials -- usually this will be the HFC district commander – who provide encouragement and support to the residents of the city or to leaders of different organizations.

The HFC is also prepared for a situation where the regional government, or a mayor of a city, will become unfunctional or inefficient. For that purpose, the HFC keeps a special team that at any moment can take over the management of a small city, or a community, in case it is needed. The information about the situation in the city is delivered to the HFC by those officers that are pre-deployed to the local government HQ and are assisting the local government in time of emergency.

Distributing information during emergency:

One of the biggest challenges that we have is how to control the flow of information to the community. Because rumors, as we said before, rumors can fly very easily among people. And since the media is not regulated by this organization, we have to

set up a mechanism that would control the information that goes out through the media. Furthermore, we need to have an immediate response in case misleading information is working its way to the population. The information control is a battle in its own right, because we know for sure that our enemies are preparing to use the media to increase the confusion within the population. The usage of social media and cell-phone networks such as WhatsApp for distributing false information was done in the past and is expected to happen again in the future.

We use different methods to control the information; The first one -- the most traditional one and the most important one -- is assigning a military officer in each one of the media resources (radio, television, major newspapers etc.). This person becomes a part of the journalists and experts team, and he is the one to deliver the message from the army to the population. So every TV station and radio station, has an officer at the rank of a colonel with military background and a special training joining them immediately as an emergency situation occurs. We use these officers as the front line contact-point of the Army to the population, on a 24/7 availability base. Each one of these officers has his working experience at this specific channel for many years and they become a part of the media-experts team. Whenever there is a question dealing with the military situation this officer will be the one to deliver the formal response of the I.D.F. Each year during the national level exercise we will train this group of officers and at some of the cases -- train the media channel as well.

Second, there is a website and several other Apps where every citizen can find a lot of information on how to prepare yourself for emergency. During times of critical events you can use this channel to get the HFC Guidelines. This channel is also useful for transferring information only to specific region under an emergency event. For example, in case of missiles or rockets attack fired towards a specific city or community, we have the capabilities of detecting that and setup the sirens and alert messages only in that specific area.

Third, we have other social media channel as well, such as Facebook and Twitter. The HFC channel is one of the most popular in Israel with many followers every minute. Any information that is delivered in emergency flies through the net to large population. And finally, we have a calling center, manned with hundreds of conscript soldiers, ready to answer any call from the population and deliver a formal answer to any problem that arises during emergency.

Comments

Mr. Einar Tangen, Principal, DGI/SMP DESIGN

I wrote a book about FAN-TAI. They wanted to know what the economic development potential was. I'm sure you all remember that, in the summer of 2012, there was a big flood in down in FANGSHAM, 77 people were killed, not just there, but in other places, 1.6 billion dollars in damages. Now, what was the response? The local leadership was caught on 24 hour call. They were not allowed to go home. They stayed in their offices, they mobilized their people, and this is the way that they dealt with it. Now, I asked them afterwards what worked and what didn't work.

I was a city official in the US. We also had some floods. Nothing as bad as this, but I wanted to know, just for my own personal experience and for writing these pieces, what worked for them :

1. Planning at the national level is the most important thing the you can do prior to any kind of emergency. It's the planning that is the most important. Also, you have to establish a event horizons, and by that I mean "10 year event, 15 year event, a 100 year event."

What do you prepare for? You cannot prepare for a 1000 year event, because you don't know about it. Right? But you can't use that in Public Relations, when it happens. Because the people don't care. They say, "oh, this happens once in a 1000 years, but my brother is still dead. I'm out of my house, telling me that it happens once in a 1000 years doesn't help me. so you always have to have an extraordinary plan. You have your regular plan and you have your extraordinary plan, and you have to handle it.

2. Public Relations, internal communications are essential. If you do not have a PR plan... go back to New York City, what was the PR plan? The mayor was on stage, all the time. He brought all of the experts into the room. He controlled all of the PR and message. The reporters did not dare leave the room, because every time they would say, we're going to get an update from this guy, we're going to get an update from this guy. So he controlled the message. All the eyes of the world were on him. So you prevent rumors. Right? You prevent people from creating mischief or just imagining something. This is one of the worst things that can happen. Right? People start spreading rumors. "Oh, they're about to attack this area, they're about

to attack that area. It goes viral, especially today with the social media, so you must have clear communication.

3. The other thing is that on the national and regional level, the issue is logistics. Getting resources to the local people, who have the local knowledge. In the Federal Emergency Management Agency and in my city, when the national people came in, they were very arrogant, they wanted to take over, but they knew nothing. They knew nothing about anything. They just would say "Who are you? Are you the mayor? OK, you're under me! follow me!" And they would say "Get me a map!" and they were drawing circles where they were going to distribute aid and where they're going to set up offices. This is ridiculous. No one can come that low. That's what I mean. Where the national planning comes in is before. All the locations... also remember, you must have a plan that reflects responsibilities. And what I mean by that is, if something bad happens in China, at the city level, the party secretary and the mayor, they will suffer. So it is for your benefit to draw them into the plan as the primary people who will going to be responsible. They have their people, they are in command, or they should be in command of their resources and people. They will suffer, so they will work hard to make sure it happens. They know the whole area. Rely on them, the plan should rely on them, not on somebody coming from some other place who knows nothing about it.

The logistic thing can be on the national plan level, logistic things are so important. When you're trying to clear roads in some area, you have to know where there are machines that can be brought in, how they are brought it, you have to assume all these things that the railroad might not be working and you have to assume air lift. You may have to be in contact with the military, and say 'we may need your heavy lift helicopters available to bring in things in these particular areas. You can identify them. This is not the same everywhere, but you can identify where they are. That's kind of national planning.

The last part that they mentioned is that there has to be a review after whatever kind of disaster, man-made or natural, that there is. Everything has to be reviewed in terms of how it worked. Did it work? Was the plan sufficient? How can you improve it? And then, how can you prevent it. The problem that we had with New Orleans is that it's going to happen again. It's not if, it's when.

In San Francisco, you know, you mentioned how people get used to a disaster, they have been forecasting that a major earthquake will happen in San Francisco within the next 25 years. Yet, it's one of the highest price real estate in the world. And the truth is that it's going to be cataclysmic, millions may die if there is a strong enough caliber of an earthquake. What plans are in place? They say that they increased the construction standards, that they try not to build on landfill, which is what happened in the last time, with houses literally swallowed up because the landfill is loose and when it gets shaken, it's like sand, it sucks everything down. These are types of things that you have to put in your reports and give fair warning. You're not responsible for their actions, you're responsible for the advice. So those are things to keep in mind.

These are more on the theoretical level. It's policy, leadership and things like that. One of the things I took from this is that without effective government response to whatever the crisis is, you will see a rapid deterioration in social resilience if they feel that the government is not able to handle it. If they feel that nothing is happening, that people are dying and no one cares. Remember during the Szechuan earthquake the General first said "look we can't save everybody, but when he became very popular was when he said "no, you will save everybody! I don't care!" and he said that very publicly, although he didn't have the technical authority to even be telling these Generals what to do. But from a PR standpoint, it was the perfect thing to say. And you have to keep those kind of things in mind when you are preparing these plans and preparing the leaders. They have to have a set of papers, "What should I do? Who should I be meeting with? Who will be responsible? What is the clear chain of command and responsibility? Who can I call?" Phone numbers! There has to be a data bank. Because if you don't have these things you don't have a plan. All you're gonna do is dance around and at some point the public says "you're not being effective" and then he goes down.

The role of innovation and entrepreneurship in building a resilient nation: Measuring and Building Social Capital

Prof. Shlomo Maital

Measuring Social Capital:

The problem I'd like to raise with you in the context of social resilience, which Dr. Gal presented so well, the problem I'd like to raise is not about the numbers that we do have. The main message I have is that we don't have numbers that measure something called social capital. **Social capital is the concrete expression of the value of love, the value of people caring for each other and helping each other and taking care of each other.**

I have a good friend who was a senior executive for Intel (he is the executive vice-president of Intel Corporation, second only to the CEO, and I asked him to deliver a course with me on innovation, and so we built a Coursera course together called: "innovation lessons from a master."

The first lesson he began with was a lesson about love. How you have to preserve and care for your family and your spouse and your children in your career. You know, a career in a startup or innovation is very demanding. The first lesson he shared with young people was a lesson about social bonds and love and social capital, so that's what I want to talk about. I warn you, I will raise a lot of questions to which there are not a whole lot of answers.

Innovation and Entrepreneurship

I'm going to talk about innovation and entrepreneurship as part of resilience. We discussed a lot of these issues and problems and challenges related to how people and families and cities and countries respond when bad things happen. But one way to build social resilience is by having creative innovative people. Creativity and innovation and entrepreneurship -- it's really simple.

Somebody with courage identifies a need or a problem and then thinks about a way of satisfying the need, meeting the need and then has the courage to take action.

We talk about entrepreneurship in terms of startups and Bill Gates and so on, but there's something called social entrepreneurship and that is about people who start ventures not to make money but *to meet a social need*. I recently met with a young man named Yonatan Weintraub, he's in Silicon Valley now, and he has a company called Space IO, he's taking part in a Google X competition to land a robot on the moon and to have the robot walk 500 meters unaided; his company is one of the frontrunners and he has already a contract for a rocket launch to space in 2017, next year.

The reason he's doing this is to excite young Israelis about engineering and space and science. Because -- we have a problem in Israel, many of our children want to become lawyers; they don't want to become engineers. So social entrepreneurship, harnessing creativity to benefit society rather than make a profit, is becoming increasingly important.

I hope you found this morning interesting. I found it absolutely fascinating. We heard two excellent presentations from Dr. Gal, who's a psychologist, and other comments from other experts here. I am an economist and I will try to give you my angle, my perspective on social resilience and then we'll hear from Prof. Zhang who is a scientist and an engineer. *I think social resilience needs a holistic perspective from all these different disciplines.*

Alice Hertz-Sommer: Quintessential Resilience:

I want to begin with a little story. The woman you see in the picture, her name is Alice Hertz – Sommer. She passed away not long ago, she lived to be 108. Alice Hertz – Sommer is a holocaust survivor. She was taken away to a Nazi death camp called Theresienstadt, with her little boy.

She was taken away to this death camp, where the conditions were really bad, in 1942, and she was there for 3 whole years. And she was kept alive temporarily, because she was a pianist. So the Nazis wanted to show off this camp as if it were a vacation home and she was a pianist, so she played the piano. But she knew that if she played poorly, or if they got tired of her, they would send her off to the gas chambers and she would be torn from her son. So she was resilient. I want to show you 4 minutes of a short video about this amazing woman, Alice Hertz – Sommer, and let's try to understand the secret of her resilience.

<https://www.youtube.com/watch?v=8oxO3M6rAPw>

So we can talk about national resilience, social resilience, but in the end it's about one person who has the inner strength and the ability to overcome very very hard things. So, let's begin with that one person, with Alice Hertz – Sommer, her story is that she survived the death camp, she came to live in Israel with her little boy, she played the piano until she was 108, every day. Her little boy became a famous musician, he travelled the world. I think he played the cello. Eventually she moved to London to be near him and she passed away in London at the age of 108.

So, what are the sources of individual resilience -- One person who has really bad things happen to them and they have the strength to bounce back, as Dr. Gal mentioned.

Sources of individual resilience & social capital

Optimism - “everything is a gift”

Meaning - “my music – I can play”

Social unit, cohesion - “my little son”

Lack of blame - “we are all both good and bad”

A Sense of Optimism:

I think the first is a sense of hope and optimism. You heard what she said: “everything is a gift,” including the bad things that happened to us. Because the bad things that happen to us test our courage and our ability to overcome. Everything is a gift, optimism.

Meaning: Dr. Gal mentioned the book by Dr. Frankel, 'Man Search of Meaning'. I show my students a video by an entrepreneur named Guy Kawasaki. And Guy Kawasaki tells his young students "don't try to make money, try to make meaning. Find meaning in your life." That means create value for people. Make people happy. If you make meaning you can make money, and if you only try to make money, you won't

find any meaning in life. Her meaning was music, as long as she could play it, she had meaning for her life, every day.

The social unit: We're all part of social connections, we all have spouses, loved ones, families – those are sources of strength. This is the first lesson that we teach our young students in the course innovation lessons from a master. "be aware of the source of your inner strength, your family, your loved ones and cherish them and protect them and don't sacrifice them as you build your business." She was a social unit, she formed a unit with her little son. And they supported and helped each other, and she got strength from him, but of course, he got strength from her.

Lack of Blame: And the last part, which is really difficult, is called "lack of blame." So you have evil people exterminating millions of people and causing her to suffer and lose her parents for no reason. What more clear blame could there be? But she refused to blame. She refused to hate, because hatred is destructive. And she said, as we saw in the film, "we are all both good and bad." All these things I think help us understand the resilience that one person can have that will let you survive really hard situations. And perhaps we can expand these in order to understand how communities, cities, and whole countries can become similarly resilient.

Social Capital:

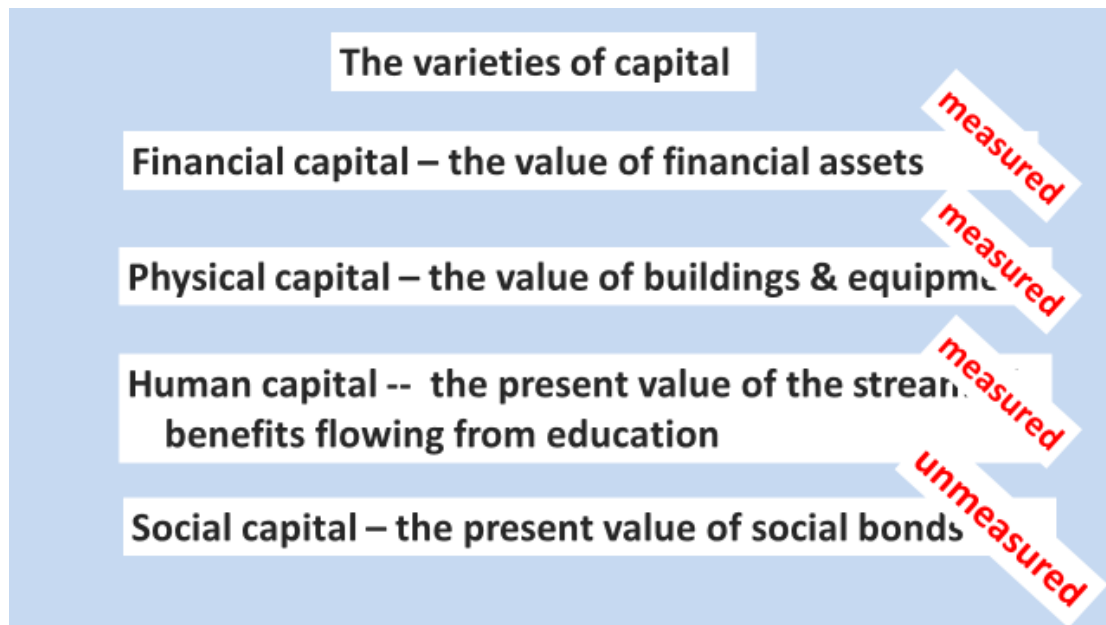
I'd like to talk to you about social capital.

I'm an economist and economists think in terms of money and capital, that's who what we do. Social capital is the summed present value of the monetarized value of social bonds or connections. All of us have social connections. I know people who have really good social connections and those connections are of huge value and they help these people make wonderful businesses. They have credibility and trust, people trust them. You can place a money value on these social bonds. It's not easy, we'll talk about it in a moment. But social capital is a form of capital that expresses the money value of the fact that we have love for people and they have love for us and they trust us, and they're eager to do business with us and those connections, those bonds, are of immense value.

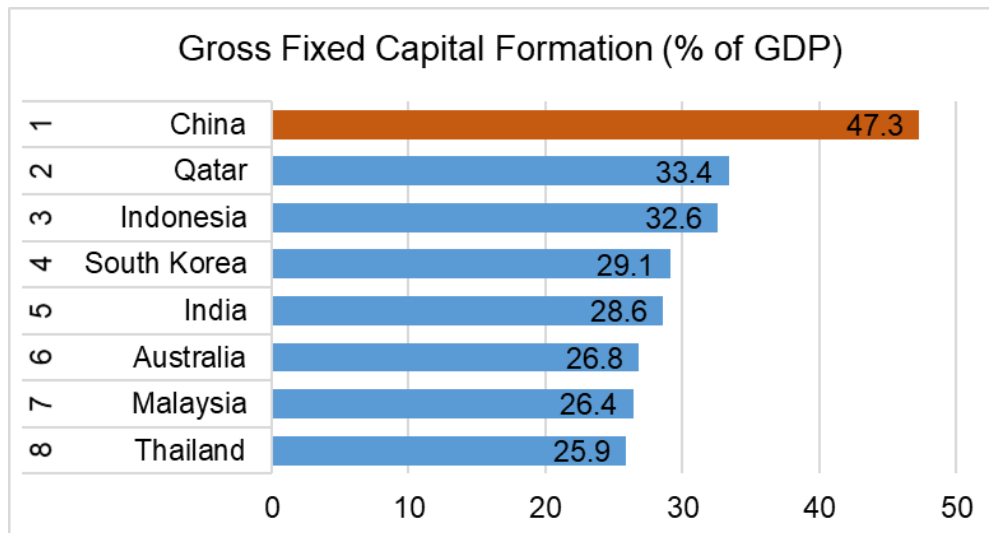
You all know people like that, people who are trust worthy and whose trust is worth a great deal, if you put money value on it. We Israelis, we're very impatient people, when Israelis are coming to China and they want to do business and they want to find a Chinese partner and they want to draw a legal agreement and sign the contract and

go home. And they have a return ticket for next week. From my understanding of China it doesn't work that way. First of all you need to build a social bond. You need to build trust with the people you want to do business with. You need to build it and takes patience and it takes time, but when that trust exists, it's invaluable...

So, social capital, I think, is very important and if we could measure it, it would be a very big number for a country. But I don't think it's being measured. And that's ironic because we measure every other kind of capital. We measure financial capital.



The world has three or four hundred trillion dollars of financial capital in financial markets. We have human capital, we have physical capital, but **how much social capital do we have in the world?** And much more important than that – is the social capital in the world increasing or decreasing? Is the love in the world, between countries and within countries going up or going down? Because if you don't *measure* something, you usually can't manage it. If you don't measure something how can you change it and improve it?



So, on the slide you can see something called Gross Capital Formation as a percentage of GDP. This is the amount of physical capital invested in countries, bridges, trains, infrastructures, buildings, homes, all of those things that comprise physical capital. And China is the leading country in the world, by far, in terms of investment in capital formation as a fraction of GDP. China invests a half of its GDP in capital investment. That's why you have such beautiful airports and incredible trains, and such a strong infrastructure. And this is a key part of China's growth and development and wellbeing. But what about the other aspects of capital? Social capital, relations between people, our communities, our neighborhoods? Are these going stronger or weaker as cities grow larger? And as you know, cities can be very impersonal and lonely places. So, how much social capital is China investing, or America? Some of us have a feeling that America's social capital has greatly declined in recent years. But we don't know because we have no measures.

So, what is social capital? I'm talking about social capital as an economist's way of understanding social resilience, because social capital is the measurable quantified expression of the social bonds that comprise that strength and social resilience – the ability to bounce back. And here is the simplest possible explanation of social capital, not from an economist, but from a sociologist.

"If I ask for help from someone, and receive help, I get a benefit." You can sometimes even put a dollar value, or a yuan value, on the benefit that I get because people help. But the person helping me also gets a benefit. Because that person, who's helped me, has created a kind of unwritten obligation. It's not a legal contract but if someone helps me, I'm much more likely to help them in the future. And it's like they have an IOU, an unwritten one, so that they know they have a social bond with

someone. If they get in trouble, they have someone to call on to get help. So, this is the simplest definition of social capital. *Helping people and anticipating that they will help you, too, in the future, if you need.* And it comes from very simple places. First of all, it comes from our family, our immediate family. One of the tragedies of modern hi-tech industry is that sometimes entrepreneurs succeed, wildly, but they sacrifice their family. Because they spend no time with their family while they build their business and in 20 years they wake up and they look back at their career, and they're very wealthy but they have no family.

The simplest possible explanation of social capital

"If I ask for help from someone, and receive help, I get a benefit. That gives the giving person, too, a benefit, because they can draw on this 'social capital' in time of need."

FFNC

Source: James Coleman, AJS, 595-5120, 1988

Family ... Friends Neighbors ... Community

Family, Friends, Neighbors, Community:

Sometimes modern life is very destructive to the old-fashioned neighborhood, where people were proud of their neighborhood, proud of keeping the streets clean, keeping the criminals away, and took action to do so. So ultimately, in the end, social resilience comes down to the group of people around us that we can count on and rely on them for help. Family, friends, neighbors, and community.

This definition of social capital comes from an American sociologist, named James Coleman. This idea of social capital has to do with social relations. But, I'm afraid we economists have missed the boat because we talked about measuring every possible form of capital, but not the most important one, the one that truly effects our quality of life.

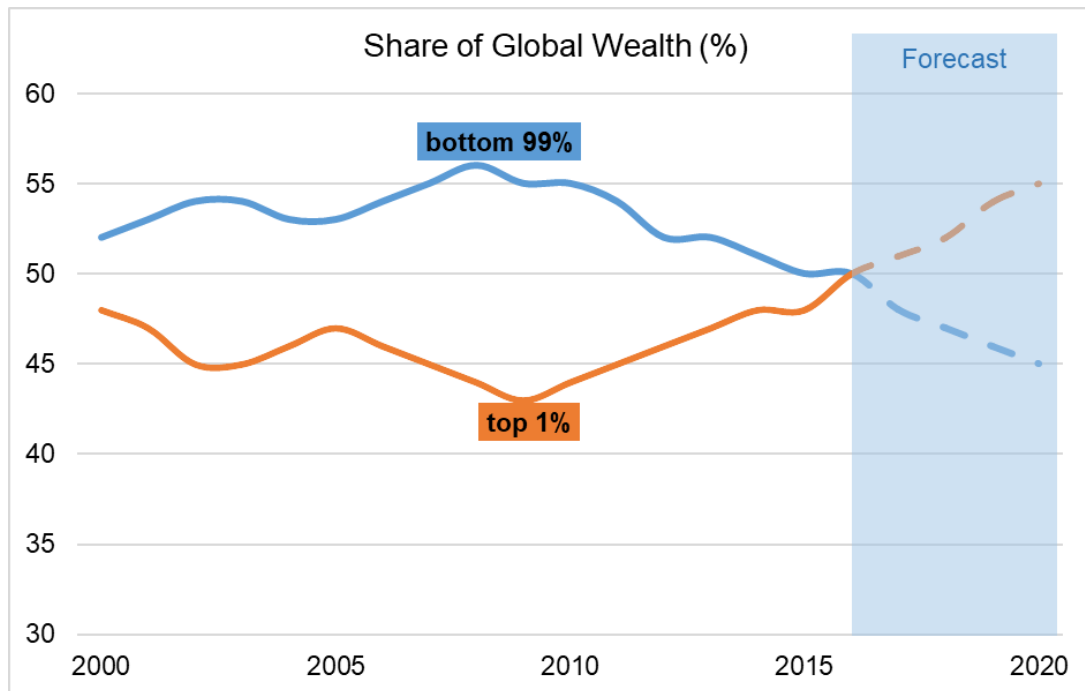
So, we have financial capital, I can tell you how much financial capital there is in the world, we have physical capital, the value of buildings & equipment, we have human capital. This was also a discovery of economists. People themselves are a kind of

capital because people become more productive and if you value the present value of the flow of benefits flowing from their knowledge and education, you can get a sum of money that represents human capital. And those are all valuable ideas.

But what about social capital? The present value of the social bonds among people in a country. The first three types of capital are measured. Social capital is largely unmeasured. And I think because it's unmeasured, we are underinvesting in social capital. So many things that are done in today's world are breaking these fragile bonds among families and neighborhoods and communities and we're not aware of it because we don't measure it. And if you don't measure something then you can't manage it.

Underinvestment in Social Capital:

Here are some examples of how we're underinvesting in social capital. I'm an economist. I'm ashamed of my profession. Because the economists have sold the world a terribly destructive idea, which ordinary people will find makes no sense. The idea is this: if you take a lot of very greedy people and place them on Wall Street and if you do whatever they want, and if you give them a whole lot of money and you praise them for becoming really wealthy and the wealthier they are the more powerful they are, and if you let them use their money to finance politicians, so that the money system gets ... to the political system, and then the political system can never make rules that will be against these wealthy greedy people, if you create a system called free market capitalism, based on greed, that somehow this system is going to work the best for the whole nation.



Source: World Competitiveness Yearbook 2016 (IMD Lausanne, Switzerland).

That was the kind of the idea that economists sold the world. Not just the University of Chicago economists, but many others. Most of my profession. And it's an absolute wrongheaded idea and here's why. If you look at the graph, you can see that this year, now, as we speak now, an important trend has occurred, what we call an inflexion point. The amount of wealth held by the wealthiest 1% the of the world is greater than the amount of wealth held by the other 99%. This is called "the 1% problem". Enormous inequality of wealth and as you can see from the dotted lines, it's getting much worse. We just had a big controversy about the Panama...and wealthy people hide their wealth offshore and with no tax and they do that with great ease. We know that the richest 62 billionaires in the world, if they add up their wealth, it becomes equal to the wealth owned by half of the world, 3.5 billion people, most of them don't have any wealth at all.

Building Social Bonds:

So how can you build social bonds, people who care for each other, people who care about each other, if you have a system where a handful of people do really well and a very large number of people struggle. This inequality of wealth, I think, has greatly diminished our social cohesion. Every society needs a glue that binds us together. I think one of the times of greatest social cohesion and social capital and greatest social cohesion was in the Great Depression, in the 1930's.

My parents were married in 1929, right at the start of the Great Depression, and they struggled through it. The Great Depression was a time when there was no unemployment insurance, there was no social security. If you lost your job – tough. And the government was unable to help, and we all know about the New Deal of Roosevelt but the New Deal was very small. The only people you could count on to help were your friends and family and neighbors. And people did help one another. I think the 1930 Depression, which was terrible, was a time of great social cohesion, a time of social resilience. And people bounced back and they rebuilt their lives and their jobs and their families. But today, with a few people who are wealthy and many who are not, people have the feeling the system is unfair. Those who have a million dollars can earn 8% return on their money, without doing anything, net of inflation. People who have small sums, can make 1% return or barely that. So the rules of the game are not fair. They're different for wealthy people and for poor people, or middle class people. How much social cohesion can you have in a system when people feel that the rules are unfair? And that they're playing in a game where the rules are tilted badly against them.

How to Raise Children:

I want to talk to you about children. I think this is an issue in social resilience. And something I know a little about. My wife and I have 4 children. Those children have 13 children of their own. We have 13 grandchildren, of all ages, 1 to 23. Our oldest grandchild is a soldier. Dr. Gal has 5 children and 12 grandchildren. So between us we're in a tie with 17 children and grandchildren. Something that concerns me a lot is children and social resilience. Our responsibility as parents is to raise good kids. We want to educate our children, we want them to have good values. We want to provide them with all the things that they need. We want our children to be really happy. But I think there's a problem.

A Paradox of Social Resilience: social bonds are built on love - but can love be destructive?



Individual and social resilience and child development:

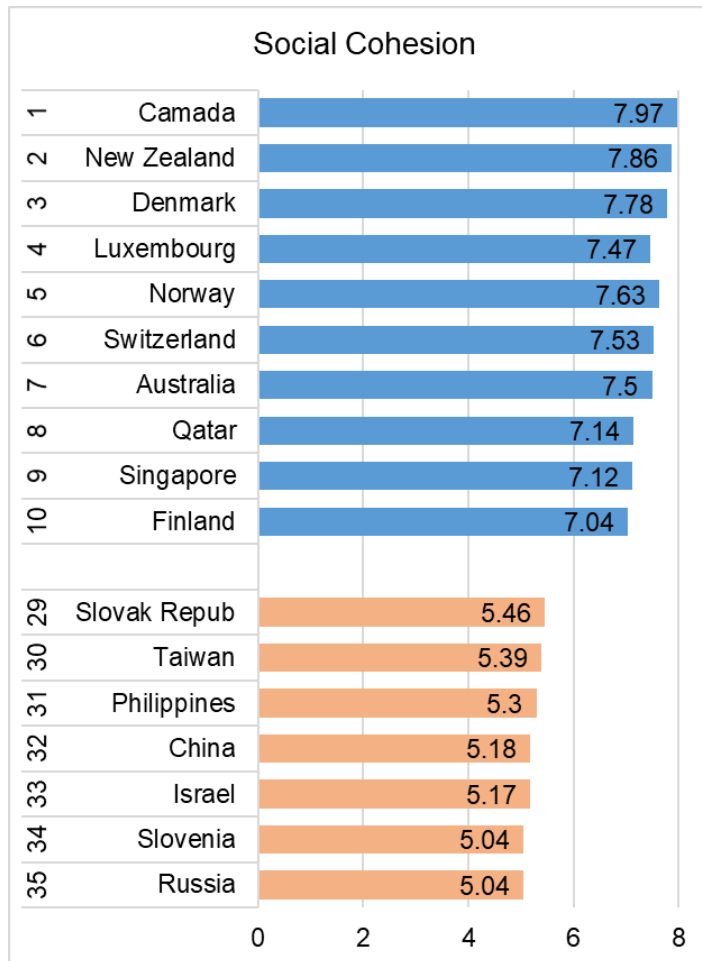
**The more we provide for our children, and the easier we make life for them –
the less resilient they become**

The more we protect our children, the more we give them, the more we provide them with things, the more we keep them from being hungry and cold and frustrated - the less resilient they become. We have children now called "cocoon children." The silkworm weaves a cocoon that protects the larva inside the cocoon with this wonderful blanket of silk. We do that for our children. And our children may not be as strong and resilient as we are. Because all the people in this room, I know many of you and I know some of your stories. And some of you have been through really hard times. And you've been resilient and you bounced back from it. And that experience has made you stronger, and has made you self-reliant and more efficacious. The belief that "I can do this. Even if bad things happen to me, I can endure." But how will our children have this feeling of efficacy if we never test it?

I used to take my children out for a run. I'm a jogger, I've done several marathons. Sometimes I took my children out for a run. They really didn't like it. It was hot and they were tired, but we did it anyway. All my sons served in the army, and some of them served in elite units. You can't imagine how hard the trials were, that he had to pass to get into this unit. It was pure torture and he was able to succeed and I think it part because of me, because he had some experience with pushing himself.

Are we making our children resilient enough? And how do you do it? Because you don't want your children to be unhappy or cold or frustrated. How do we equip our children with all the things we want them to have but also to know that they can overcome life difficulties and that all human beings run into trouble in their life. I don't

have many answers. My wife is a school psychologist, she's an expert on children, she knows some of the answers, maybe Dr. Gal has, I just want to raise these questions, because in a sense, social resilience is not just about China, Israel, countries, cities; it's about all of us and our children and our grandchildren and our loved ones. Are we equipping them to deal with life?



Source: World Competitiveness Yearbook 2016 (IMD Lausanne, Switzerland).

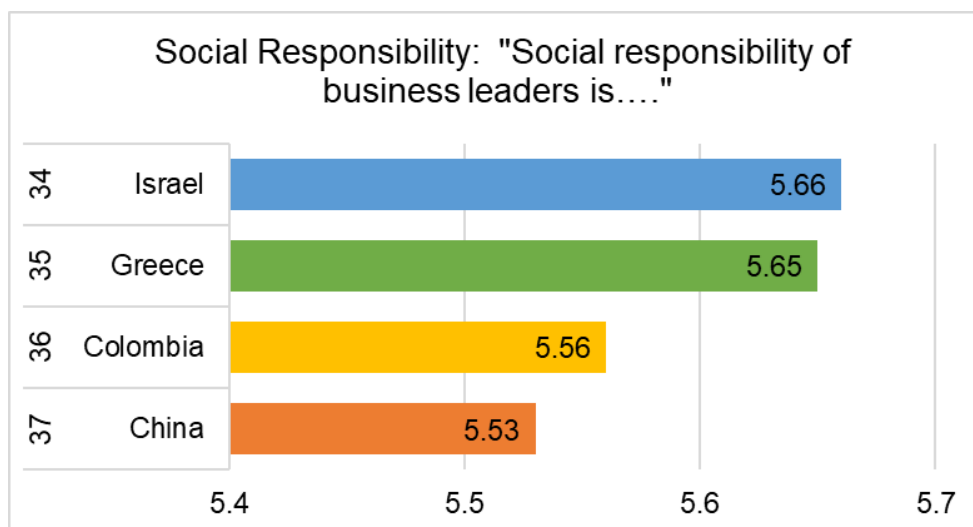
Data on Social Cohesion:

I'd like to show you some data about social cohesion. I think social resilience is related to the glue that holds us together as people, as a country. Dr. Gal talked about countries in WW2 that were able to overcome great challenges. You all know the story of Great Britain and the leadership of Winston Churchill. Finland has an amazing story . it's a tiny country. It's a huge area, 330,000 sq. km., but today Finland has only about 5 or 6 million people. In WW2 it was a tiny country and the Soviet Union attacked Finland in the winter. Finland did not win, but they didn't lose either. They put on white camouflage suits and they made the lives of the Russian soldiers absolutely miserable by popping up everywhere unexpectedly and they fought the Russians to a draw. And

then they signed a peace agreement and being very pragmatic and resilient, the Finnish people gave away 10% of their land that the Russians demanded and they made peace and just get on with it. So Finland had social cohesion. They were resilient because the people in Finland had a common goal and were willing to sacrifice to achieve it.

So we have a measure of social cohesion. One of the business schools in Europe does a survey every year and they ask experts in each country to comment on the state of "social cohesion," the glue among the people, people care for each other, is it high or low. What is really interesting is that last year, now, China and Israel had about the same score, of 5.2 on a scale of 1 to 10. The countries that are high on social cohesion tend to be small countries. Canada 36 million, New Zealand, a tiny country, Denmark, Luxemburg, Norway, Switzerland, Australia. Australia is about 20 million I guess, but these are all small countries, they are all cohesive. Can a big country have social cohesion? What creates the glue? Sometimes the glue is simply pride in the country. So we understand now that Chinese nationalism is increasing. Because young people are proud of the fact that China is a growing power, economically and politically. But sometimes nationalism can lead to conflict. Is this a good thing or not? All sorts of questions I am raising. I don't have a lot of answers.

Social cohesion is sometimes related to government. Sometimes, in hard times, the glue that sticks people together can come apart. In the 1930's I mentioned to you that hard times often brought people together, but today, unlike the 1930's, we have big governments and very often our mind set is that it's the government's problem. If something goes wrong, the government has to fix it.

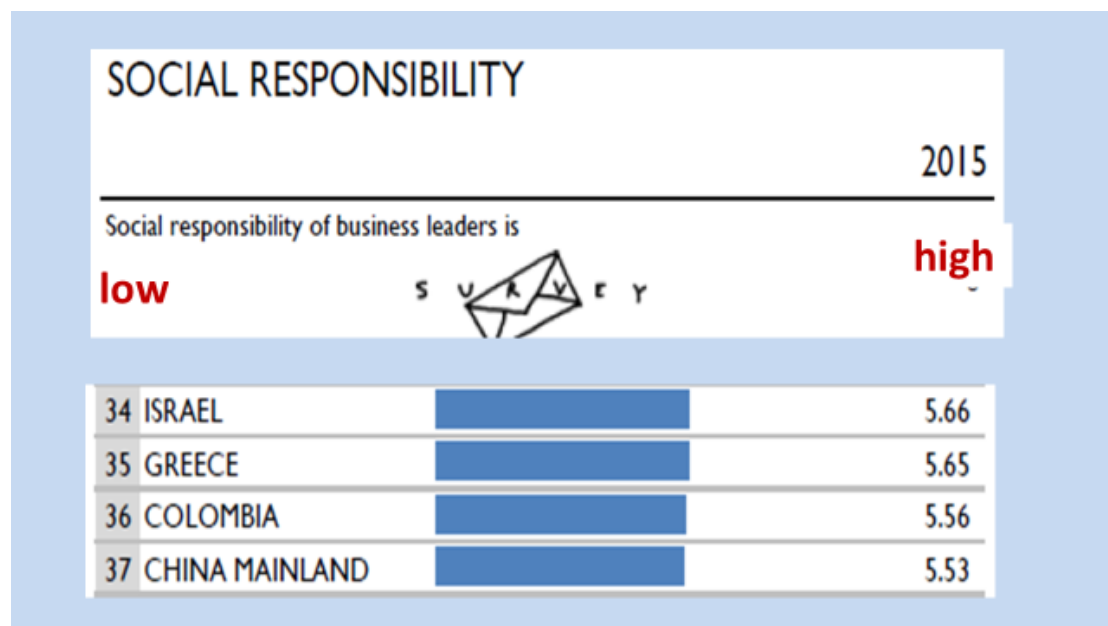


Social Cohesion in Israel:

So, in Israel, for example, in the year 2000 and 2001, this was the dotcom bubble. This was the time when the dotcom bubble burst, financial markets collapsed. Israel's economy is based in part on startups, and startups had great trouble raising money at this time because of this and we had an economic crisis and a recession. And the government, btw, led by the then Finance Minister Bibi Netanyahu, our PM today. The government took fairly severe measures to cut the budget deficit and these measures hurt poor people a lot.

So this is the measure of social cohesion and whether it's a priority for the government. And you can see that from the year 2000 to 2003, in Israel, social cohesion as a priority for the government fell drastically, because the people felt that the government was discriminating and hurting the poor people.

We have a different ball game today, with big governments. We have an expectation that governments will step in and help us in hard times. When they don't do that, this social glue can in fact become apart.



Source: World Competitiveness Yearbook 2016

Social Responsibility:

There is also a concept known as social responsibility. Note that these concepts are closely connected. Social cohesion, social capital, social responsibility and, of course, above everything, social resilience. This is a survey done by the same

business school. Experts rated the country in terms of the social responsibility of business leaders as high or low on a scale of 1 to 10. And once again, Israel and China are very close together. We are somewhere around 5.7 on a scale of 1 to 10, which is not high. So we have another aspect of social resilience which is the responsibility of business to help other people. We have my friend Prof. Na with us, and he's an expert on Peter Drucker, an Austrian Jew who became the world's greatest management expert and consultant. And Peter Drucker had a three-part formula for success in business, this I learned recently from Prof. Na. Step 1 in business: do well. If your business isn't strong you can't help anybody. Step 2: do good. If you do well and have the resources, you have the responsibility to help other people, as many as you can. Using your resources and using your business skills. And step 3: at least do no harm. Don't hurt people with your business. I'm not sure how many businesses today believe that they have the duty and obligation to use their resources and their ability to help their society.

My fellow economist, Prof. Milton Friedman from Chicago, Nobel Prize winner, passed away a few years ago. Milton Friedman taught his students, and many have believed it, that it is immoral for a company to give money for social causes. It's immoral. Why? Because they're giving away the shareholders' money. If the shareholders want to contribute to charity – do it. But the company has the responsibility to make the maximum profit and then give the profit to the shareholders. The shareholders will do with it what they want. That's not exactly social responsibility. And a lot of businesses believe that and are run on that basis. How much social resilience will you get when companies have this Chicago ethos? --

I'm getting to the end of my time, and I want to raise some questions.

How can China build its social capital ?

Creativity: *widening the range of choice*

Innovation: *a novel & useful idea, implemented & scaled*

Entrepreneurship: *implementing an innovative idea*

Social entrepreneurship: *implementing an innovative idea mainly for the benefit of society, rather than for profit*

How Can China Build Social Capital?

China is an incredible machine for capital formation, for physical and financial capital, absolutely incredible. I used to teach at the Sloan School of Management at MIT and we had students from all over the world. And I always used to ask the students: How much of your income do you save? Students from America said "very little, maybe 5% and often not even that." And I asked students from China and the students said that they saved 40% percent of their salary. And everybody in the room gasped and asked them "Why do you save 40% of your salary?" and the answer was pretty simple. One student said he felt that he didn't have a government safety net. He doesn't have social security and if he and his family got into trouble, all that he could rely on, basically, was his resources, and these resources had to be available to help other members of the family if they got into trouble as well. There's research showing that America's social security system has greatly reduced the rate of saving because people think that the government will be there when they need to retire. And guess what? It won't. because the social security funds will be bankrupt, will be broke in just a very few years. And people in America are beginning to discover that and realize that their income is not going to be there when they retire, they're going to need social bonds and social capital and it's not going to be there.

So, how can China build its social capital? How can you can you take your amazing performance in creating physical capital and infrastructure and also enhance your social capital? And how much is that social capital, can it be measured?

So, I'd like to suggest one possible way.

Creativity is widening the range of choice. Creative ideas give us more options. Can we use our creativity to help build social capital? And how can we do that? We can do that by becoming innovative. Innovation is a novel and useful idea, developed by creative people, and then implemented and scaled throughout China. So we use innovation to help build social capital, to help make people be more resilient.

Entrepreneurship is implementing an innovative idea. We take an innovative idea, we start a business, we build a business and scale it up.

There is a concept known as social entrepreneurship. We call Israel "startup nation" but China infact is THE startup nation. Every single day in China 4000 new businesses are started. Last year, 1.6 million new businesses were started in China. I just came from Shantou University, in Shantou, Guangdong, where I teach on behalf of the new initiative, Guangdong Technion Israel Institute of Technology. I taught wonderful young students a course on entrepreneurship and many of them, at least in their dreams, would like to start a business, including the young women. We talked about how to do that and I think many of them will do that. They are aware of the fact that in modern China, they're among the first generation that have this option, that choice. For hundreds of years it wasn't really possible or feasible to start a business in China. And young people can now do it. But why start a business? Well, you can do it to make money, to become wealthy to become Jack Mop or you can do it to help society. Social entrepreneurship is a way of building social capital. And I think it's a way of building social resilience.

Case Study: Israel – “Yad Sarah” (Sarah’s Memorial)

How it began: 1976 - Uri and Michal (Jerusalem) needed an inhalator for their son. Later they loaned it to others.

People in the neighborhood brought to Uri & Michal medical equipment they no longer needed, for lending.

Uri’s father Yaakov sold his small shoe-store business and donated the money to launch Yad Sarah (named after Uri’s grandmother Sarah)

Case Study: Yad Sarah:

I'd like to bring you a case Study from Israel about **how one person with one small idea can grow into something that creates enormous value for people, and create social capital and create social resilience**. We have a non-governmental organization, in China you in China call it not for profit, because there is no such thing as non-governmental, but this is a non-profit organization called “Yad Sarah” (Sarah’s Memorial). Sarah is the name of the grandmother of the founder and "yad" means kind of memorial. Dr. Gal drew this to my attention, and I looked into it and it's a wonderful example. And I'll tell you the story of Yad Sarah.

40 years ago, a couple living in Jerusalem, named Uri and Michal Lupolianski, needed an inhalator for their son, a device to help him breath. He had asthma. So they bought an inhalator and it was quite expensive, and they begin lending it to people in the neighborhood. It was a religious neighborhood. This is important because one of the core values of religious people is helping others. And so the people in the neighborhood started bringing medical equipment to the home of Uri and Michal. E.g., crutches, no money involved. Someone says, “I broke my leg and I needed crutches, my leg is fine now, I don’t need the crutches anymore, maybe somebody does”. People in the neighborhood brought to Uri and Michal medical equipment they no longer needed, for lending. So they brought equipment to the house of Uri and Michal and a small organization began, where people would come to them and they would borrow a wheelchair or crutches and sometimes they would donate money, and sometimes they would get it for free, if they had no money.

Uri's father, Yaakov, had a shop. He retired, sold his small shoe-store business and donated the money to his son so his son could develop this social entrepreneurship. They named it ***Yad Sarah*** after Uri's Grandmother Sarah.

Today: 40 years later

281,000 loans of equipment

Over 500,000 people assisted

\$22 million annual budget, saving the Government \$400 m.

105 branches, 6,000 volunteers (many senior citizens)



Vision: Provide, via volunteers, *quality home care support services* to the ill, disabled, homebound, frail or isolated

Forty Years Later:

Fast-forward 40 years later, this organization has done 281,000 loans of equipment. I borrowed a wheelchair for them for one of my family who needed one. Over 500,000 people assisted. \$22 million annual budget. That budget doesn't pay salaries, all are volunteers. The budget purchases new equipment, maintains vans for home visits and so on. They have 105 branches, 6,000 volunteers, a lot of these volunteers are senior citizens. They are older people. These are lonely people and suddenly they get the chance to interact with other people, to find meaning in their life. They help people and they absolutely love it. It's an example of social capital. The old people volunteer and they do good for others, but as they do good for others, they also are doing good for themselves.

Their vision is to provide, via volunteers, quality home care support services, including equipment. And the 22 million dollars, supported by donations saves the government 20 times more, about 400 million dollars a year, because people are able to maintain themselves at home, otherwise they have to be in hospitals, they need nursing care with doctors and so on, so this is a great example of social capital. And it started with one person and one small idea and it's doable. So, social entrepreneurship, we talk about startups, but what about social startups? Can we find and with creativity, meet a need in society? And we've created people need and on a small scale start a

business and then grow it and get it rolling all of this without any government intervention. All we need the government to say is: "Go for it." And we'll try not to bother you.

So, can we build a system or a "credo," a formula, for building social resilience?

F F N C

Our Family, Our Friends, Our Neighborhood, Our Community.

There's a saying that economics is global, finance is global, trade is global, politics is global. Well, it's partly true but in any case I think social resilience is very local, because it's strongest when it's grounded in our own families, the people around us, the people we love, and the people who love us.

And the mantra for social resilience is: "I will take personal responsibility, together with my family and my friends, for the mutual wellbeing of our community." If that value were widespread and if we find ways to build it and spread the stories of it, I think we will have greater social resilience.

Summary, Suggestions, Questions for Discussion

Measure social capital; invest in it F F N C

Each family is responsible for building its own Social Capital

Does Generation Y have more, or less, social capital than GenX?

Do business leaders sufficiently build social capital?

Is social entrepreneurship widely understood & practiced in China?

Do social media create and/or diminish Social Capital?

We heard from Col. Eshel and we will hear from Prof. Zhang about practical contingency plans, software and applications and so on and websites to help social resilience, to help society in times of crisis and these are really important. In the end, it comes down to individuals and their families and the feeling of responsibility and caring about other people. I have a bad feeling that the modern economic life is reducing our own sense of mutual responsibility. I think there's a paradox here.

The principle of capitalism as the American Henry Ford expressed it is: "If you want to make a \$100, go ahead, go try, and if you succeed you can keep it." That's kind of a selfish principle. Maybe we need a different capitalism. "If you want to make a \$100, go ahead, try, if you succeed you better find ways to give it back to your community. Because the reason you made a \$100, is because your community, your country, helped you do it. And without them you could not succeed. Henry Ford had hard working people that he underpaid, who worked on his assembly line to make him a billionaire. And the truth is that he did not give back a great deal. And he used that as a credo and spread it in our society.

So my time is up and I'd like to end by raising some questions. I raise a lot of questions but I don't have a lot of answers. I hope you have some better answers.

- **Can we find some way of measuring social capital?** Because if we don't measure it we don't know if it's growing or shrinking; and we won't know if we're succeeding in building it or if we're actually degrading it. Can we somehow measure social capital?

- **Can we create a sense of responsibility so that each family needs to build not only financial capital but also social capital.** Can we cut loose this idea that the government is responsible for everything, that the government has to take care of us. Can we go back to a time before the government, when people knew that they were personally responsible for themselves and their families?

- **What about the young people, our children and our grandchildren? Do they have more social capital than we did, or do they have less?** Now, our young people are always always connected. I'm sure you know that they sleep with these things. They sleep with their cellphones and they're permanently connected. Does this mean that they have more social capital, more bonds? Does this make them more resilient? I'm not sure, I think maybe not.

Social media, Facebook, has destroyed governments in the Mideast. It destroyed countries. I don't know of an example yet where social media has built a country and strengthened its democracy and helped provide reforms and social wealth.

- **Do our business leaders sufficiently build social capital?** They build a lot of financial capital, a tremendous amount of wealth, but what about social capital? And do they think they have a responsibility to build social capital? And do they know how to do it, and do we know?

- **Social entrepreneurship:** I find that in my classes in Shantou, Guangdong, and in other places in the world that young people are increasingly interested in social

entrepreneurship. They want to find meaning in their life and they want to help other people. And they think they can do it by using the principles of good business management. The principles that Peter Drucker taught us. Because governments are not too good at that. Social entrepreneurship isn't well understood and isn't practiced in China. We can change this. Let us encourage it, foster it, and will our governments allow this to happen?

- **And finally, social media, what is their role?** Are they helping or hindering? Can we make use of them?

Thank you!

Discussion

Tadeusz Chomicki: I think excellent questions were asked and are very interesting. First of all, the most important question is the first one, how we can measure social capital, how we can not only know how to measure but also invest in social capital. Building public resilience at the beginning is very important. We see the global disintegration of powers. The change of the modern families which is producing less bonds within the families, less support. The usage of the social media is the one cause, and when I spent my six years in China I was observing the Chinese using the cellphones everywhere. I used to be a photographer, I even planned an exhibition "China on mobile," and then you have military people and families sitting near each other but not talking. I pictured people sitting in a restaurant, nine people at the table, all of them on the phone, chatting, sometimes between themselves. This is happening to our kids.

Now all these bonds, leaving local analysis aside, what happens if electricity is out? There's no bonds, right? They cannot talk, they cannot communicate. This is very dangerous, replacing real contacts with electronic communication. This is why when my kids were young I sent them to camps. I sent my son, when he was 12-13 to a survival training so he can survive 3 days without food, by himself, not to learn how to survive without food, but to learn how to work with other kids to improve the chances of their survival and how to help each other and build the bonds in this team even if it is accidental. I made my kids work in a fast food restaurant when they were 14, 15, 16 to earn money and go for a holiday. That helped, but that's not enough. Still I see dispersion of the family bonds. How to reverse it I don't know. The claimed attitude of the young generation "we expect things to be given to us" is another process. You can see it in China as a side effect of the one child policy.

I'm not a specialist on the sociology of families, but when I walk around and I see the young kids being allowed to do anything they want, to their parents and to the surroundings. In no way they are taken care by their parents. Parents allow these kids to do everything because they are princes in their families. Families put all their resources in their education, they give them everything and they allow them to do everything. How can you expect from this society, from these people that they will build a sense of responsibility? Of giving back, if they are not taught by their parents to do so? But this is of course a side effect of the one child policy in china but what happens in Poland is the same.

Last year we had governmental elections, the party which was in power for 8 years lost the elections. And it lost the elections after guiding the country through all the European crisis time and we are the only economy in Europe that never failed and actually we have the best period of history in our time. We have peace that we never had, but the young people voted against this government. Why? Because it's not enough. They want some change, they expect more from the government. Provide me more opportunities. I don't want to go to Greece and other countries, where people forgot they have to work sometimes, because nothing is taken for granted, and when crisis comes they are not ready to face this crisis because they lost the ability of that. I think it's not an answer, just some comments because I think you touched on many important questions. Maybe here in China you have some thoughts how to answer these questions that the professor has raised.

Audience: First of all, thank you Prof. Maital for your excellent lecture. Social capital to me is a myth. To what end is a critical question. Social capital means social bonds. So when we speak of that, "**guanchi**" (connections) comes to my mind. Guanchi, meaning neighbors but how we use them, to what end for self-purpose or for the common good. Thank you.

Shlomo Maital: Good point. You can use social bonds for your own selfish purpose or you can use it to help other people. There is a big difference!

Audience: for **guanchi** it's relationships, it's not like "I'm gonna do this for you because you owe me so much, it more like I'll do that and you're obligated to do it back." But as you indicated, to what end? Because this is a very risky society and people here are brilliant and there are many people who are trying to cheat you. And you need to be careful about the strangers around you who are trying to find their way in. so the end of Guanchi. Guanchi is utilized when he wants things done, but it's the people that you know and trust, so how do you extend your heart out to the people that you can trust. You know I call Taiwan, Taiwan and I hang up. I become a very risky person in China that if I don't know somebody my heart has changed. I have a very big heart and here I put a very big shield around it because Chinese people are like a tea pot: cold on the outside warm on the inside. But how do I know that I need to be friends with this one. I want to be friends with you, let's have a good relationship but it takes time and this is very difficult to do, and there's the cultural long history that what you're asking people to do is take a leap of faith. And leap is very dangerous. And so, Guanchi is important, but with whom?

Audience: First, that's a generalization. Right? Second, I wouldn't trust a lot of people in the US. It's not specific to China. You have to keep in mind that China is a civilization state saying we come from a western civilian state, a country, you come from a culture society. Culture society has evolved over many thousands of years and you have ways of doing things. The difficulty in communicating between East and West is that we can't look at everything as a contract. The relationship is defined by a contract. Not by who you are and who I am. Not by if we have a relationship. So it's often very difficult, I've seen this in business, you see this in politics, you see this in personal dynamics, it's hard to do that. But one thing East have the upper hand on the West is the idea that if you want a better world, and you're not prepared to make it better, then who? If you don't care, it doesn't matter. But if you want a better world you have to be prepared to do it.

Community Resilience and Public Safety Research in China

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This paper aims to study the factors which determine community resilience. Three dimensions including cyber, physical, and social dimensions are integrated to determine community resilience. In the physical dimension, building and infrastructure protection is the key issue, which guarantees the safety of human living environment. In the social dimension, social structure, psychological and cyber aspects are analyzed in details. Under current circumstance, young adults bear too much pressure of bringing up their kids and supporting their parents. Also, resilience related information is communicated and amplified. At last, major factors related to community resilience are presented. Emergency management and public safety research related to community resilience are discussed.

1. Introduction

Resilience is defined as resisting and recovering from natural disaster and social disturbance, which contains capability and capacity. Resilience at different levels represents different meanings. Concept of individual or citizen resilience is used to describe the ability of a person to withstand or recovery from illness or hardship. Resilience at the national level represents the capability to resist and recover from major disruptions or wars. Resilience study includes citizen resilience, organizational resilience, community resilience, national resilience, and mankind resilience. In this paper, we focus on the community resilience, which is an important part of national resilience. In the physical dimension, building and infrastructure protection is the key issue, which guarantees the safety of the human living environment. Building and infrastructure protection is the key issue. This part is well investigated. Community consists of individuals, from aged to young, and establishes the rules of community which governing the orders of individuals. Citizen and rules are combined into the social structure of community. In the following parts, we will discuss the community resilience from three aspects: social structure, psychological and cyber aspects.

2. Social structure of community

Social structure of community contains two important meanings in China, population structure and government organization at the community level. The population structure in China is the general outcome of family planning, which is carried out from 1971 to 2016 [1]. During that period, people with urban registered permanent residence ('urban people' in short) are usually limited to born one baby only. At the same time, people with rural registered permanent residence ('rural people' in short) are often having one baby

if the first baby is a boy, and are having two babies if the first baby is a girl. As the result, family structure of China has varied a lot as shown in **Figure 1**.

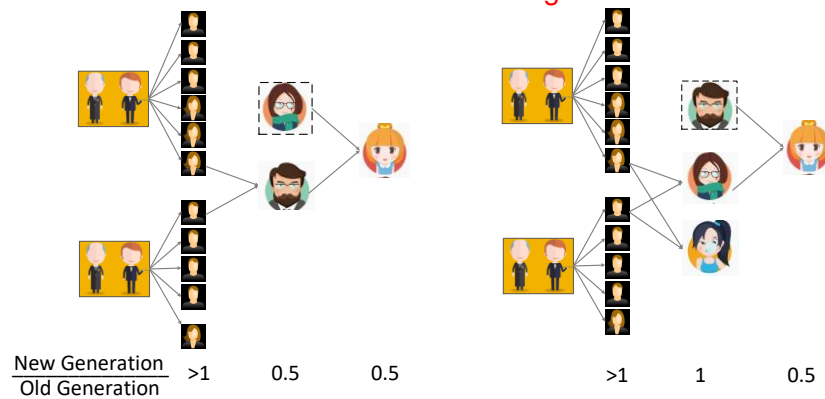


Figure 1: Illustration of family structure in China. The proportion of young to old is bigger than one before family planning policy, while the proportion is less than one after the policy.

Today, some new families have to bear the cost of more than seven family members (at least four old, themselves, one or two children). Under such structure, resilience of Chinese family changes significant. For instance, there are six family members to take care of elderly couple if the couple have six children. However, there are only one or two family members to take care of elderly couple with family planning policy. Consequently, stable occupation and considerable income become the auxiliary elements when maintaining family resilience. Social cost of social structure is critical in community resilience.

The government organization at the community level includes sub-district office, residence advisor, activist, entertainment center for aged people, and expenditure for activities. Each group of the organization bares some functions. The capacity and capability reflect the resilience of the corresponding community. Reference to the ISO 22325, eight indicators can be selected to reflect the scope, function and authority of an organization's emergency capability. Community can assess resilience capability using eight indicators, such as leadership, resource management, information and communication, risk management, coordination and cooperation, emergency management planning, exercise program, incident management system. The indicators can be seen as quantification elements when considering community resilience. Based on the maturity model, community resilience may be divided into the following four levels. At the level 1, community performs its emergency management role at a basic level. At this level, basic resources and persons are in place. Some basic emergencies can be dealt with. Minimum requirement is met. At the level 2, community has established detailed plans with the goal of achieving a balance between resource demands and availability. Emergency plans are developed in terms of knowledge, skills and capabilities to manage the incidents, and are updated periodically. At the level 3, community has designed an emergency management process to facilitate appropriate measurement and assessment which enables the community to identify opportunities for improvement. The community has worked with other communities in order to increase the effectiveness and efficiency. At the level 4, community has reached to an optimal level of emergency management capability. Critical to this level of performance is the ability to demonstrate learning, adaptive

capacity, and effective coordination and cooperation with other communities. It commits to best practice and is able to appropriately use technology.

In all, population structure and local government organization at the community level are two prominent features of social aspect of community in China. Population structure is not as resilient as before, and local organization can be improved to enhance the resilience of society.

3. Psychological aspect of community

Psychological aspect of community is mainly on cognitive psychology. The process of human memory has been studied deeply in cognitive learning theory, in which human memory process is divided into five modules and three phases according to the type of information storage. The five models are sensory memory, perception associated memory, working memory, short-term episodic memory and long-term memory. The knowledge of sensory memory stores user perception. Perception associated memory processes the information of sensory memory preliminary. Working memory store and transform the information that is received in the recent period. Long-term memory records the background knowledge and long-term retention in the brain. Cognition of the users for public information contains three stages; they are comprehension stage, knowledge acquisition stage, and attention distribution stage.

In the human brain, human reflects to external information through emotion. During the process, computation of relations of long-term memory information and external information is executed. Human uses the existing related knowledge network, which is stored in the long-term memory, to response and judge current environment.

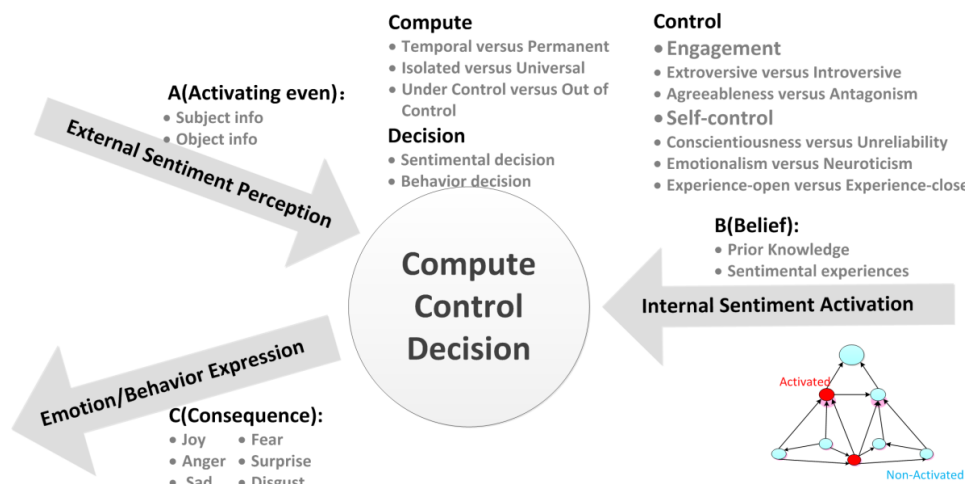


Figure 2. Cognitive model

During the process, three centers play the key roles. In the computing center, the impulse of emotion from the time, space and oneself dimension are calculated. In the control center, the ruling ability of emotions is calculated. According to the characteristics of the users, result of computing center, and empirical knowledge, control center will obtain the transfer probability of emotions. In the decision-making center, according to the result of computing center and control center, the

corresponding emotion (small, joyful, anger, and so on) and corresponding behavior (cry, talking aloud, and so on) are activated.

Emotion calculation and control are completed after getting through five modules, three stages, and three centers. Calculation is the process of information fusion based on external emotional awareness information and internal emotional activation information. Based on the above theory, psychological aspect of individuals in the community can determine the resilience of community to some degree.

The mental illnesses are the phenomena of cognitive impairment and bad social education. Individual resilience pertains to the strength and coping behaviors that sustain individuals during the stressful life events. Resilient person can continue to function normally under adverse circumstance and revert back to their original state when the stressing factors end. Social resilience is the same concept, and can be applied to communities, neighborhoods, cities and nations. Resilient societies and communities are able to face great crises, while maintaining national and strategic objectives and direction. The ability to react to the moment while staying on course allows the leaders to optimize their decisions during times of major crisis. In short, social resilience adds the element of “being resilient together”.

4. Cyber aspect of community

Cyber aspect is combined by social media and news website, such as Weibo and Wechat in China. Cyber aspect can transmit rumor. One typical case is the rumor on the housing price of Shanghai City in China. The rumor says, if a buyer as a family does not own an apartment in Shanghai, the down payment of the first house will be 50% of the total payment. If a buyer owns one apartment, the down payment of the second house will be increased to 70%. To avoid paying the high percentage of down payment, local citizens start to purchase the apartments immediately, and new transaction record is built. At last, the rumor is recognized, while the effect cannot be repealed. In this case, rumor is transmitted through the web from user to user quickly. One important function of cyber aspect is amplification.

Figure 3 shows the microblog distribution on the earthquake of Yaan China in 2013. During that time, information erupts on the web. With the help of Internet information, some victims are easy to be located.

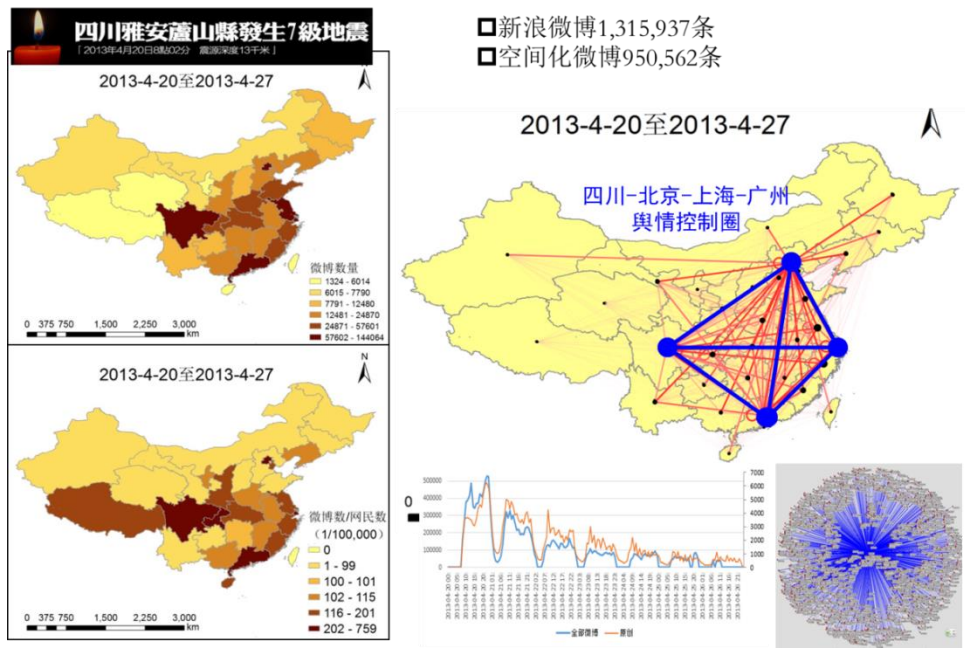


Figure 3. Social media information on the earthquake of Yaan China in 2013.

In all, complicated cyber aspect is now accelerating the process of information transformation in both advantageous and disadvantageous events. As the result, supervision must be strengthened to forbidden the bad effect of cyber space.

5. Ways to enhance community resilience

Community resilience is determined by its social structure, psychological and cyber aspects. Vulnerability may be determined by a combination of the following factors: awareness of hazards/threats, conditions of human settlements and infrastructure, nature and application of public policy, resources available to a given society, organizational abilities in all fields of disaster and risk management. Current resilience problems in China include: rapid urban growth, political instability, unemployment, poor economic conditions, unequal distribution of wealth, food insecurity, lack of personal security, and violation of human rights. The problems become more prominent, particularly when it is accompanied by a large influx of poor migrants from rural areas. The problems contribute to the vulnerability of community. Poverty and hazard vulnerability are integrally linked and mutually reinforcing. The poor people are forced to exploit environmental resources for survival, thereby increasing both the risk and exposure to disasters.

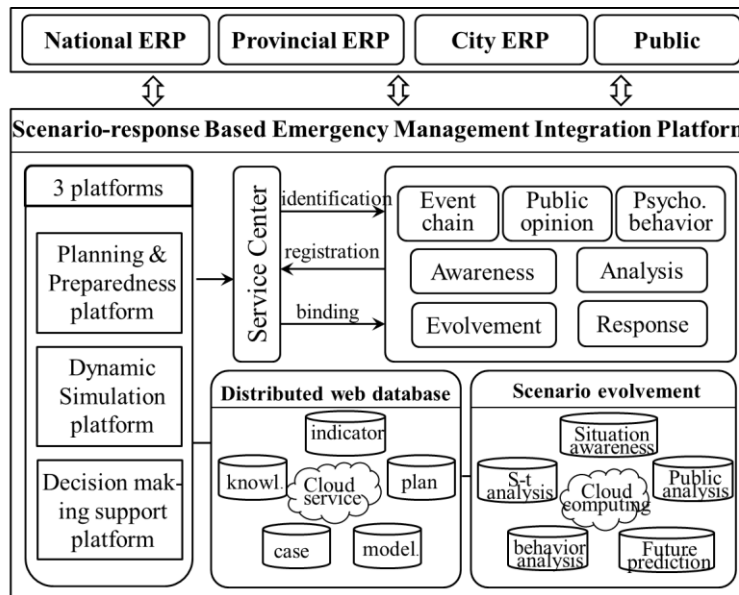


Figure 4. A proposed emergency management information system

To enhance community resilience, management information system is shown in Figure 4. In the system, three platforms are integrated. The first platform employs the public opinion psychological behavior and response information for plan and preparation. Dynamic simulation and decision making support platforms employ the historical features of cases to predict the trend of event. Under such system, we can make efforts to ensure the regular operation of public events.

6. Conclusion

In this paper, social resilience is analyzed in three aspects, such as social structure, psychological and cyber aspects. To enhance community resilience, in the physical dimension, crowds can be divided into many repeated blocks with standardized emergency management. Administrative staffs and police forces are employed in each block as a standardized modular. Each block is managed separately and then blocks are managed at a higher level. In the social structure aspect, family planning policy should be adjusted to balance current age structure. In the psychological aspect, positive mental construction should be promoted to reduce mental illnesses of cognitive impairment and bad social education. In the cyber aspect, multi-source technology may be developed to predict the trend of public opinion, to detect rumor source, and to prevent the propagation of wrong knowledge. All three issues play different roles in community resilience. Social structure operates in the long term, which is the fundamental element of community. Cyber aspect works with psychological aspect in deciding the community resilience in the short term. In all, to improve the resilience of community, all three aspects, social structure, psychological, and cyber aspects should be enhanced.

Hon. Mr. Tadeusz Chomicki - Former Ambassador of Poland to China

Resilient Nation: Poland

Colonel Eshel has discussed the practical way of preparing the community and the nation to address the constant threat imposed on Israel and the safety of the people. It is very specific and has a very high component of the military in it because this nation is under highly militarized threat. This nation is in constant training which makes the Israeli community better prepared. In the second reaction time you must be trained. If you are not trained you can't do anything. But I want to look at this question from a broader perspective: What are the important factors at the national, community or society level of resilience at a higher or lower level, and I will make one comment to Dr. Gal's presentation, one part of the presentation in which you quoted Prof. Lewis on the analysis of the 2nd World War resilience of the nations and said that the 3 successful nations were the UK, USSR and Finland, and the 5 failing nations were Czechoslovakia, Norway, Poland, Belgium and France. And that was analyzed along 5 factors that were taken into account.

I must say that this is very interesting analysis, although I don't agree with it, *I don't think that Poland was a nation that failed because of low level of self-resilience*, what this analysis is not taking into account is, for example, the power and the strength of the external factor. It's a different story if you are fighting against disaster, natural disaster, a single terrorist attack, even on a large scale, like 9 11th, and it's a completely different story if you face as a nation a situation when 2 neighboring countries, the biggest in Europe, try to eliminate you completely from the map of Europe, not for the first time, and not for the last time, in fact. So, I will say that this analysis may be interesting for evaluating the 5 elements that you listed there: leadership, national values, willingness to fight, collective goal and optimism. But the results of this I don't.

I would say that Poland is an interesting case, because it is located where it is, and there's nothing we can do about it. We are between Germany and Russia, the two biggest powers for a long time in Europe, for most of our history, and one of the most aggressive powers most of the time. These days Poland has relatively well-managed relations with Russia as part of the European Union and part of NATO first of all, but the long history of over 1000 years of wars we had to show quite a level of resilience to survive.

Poland: Largest in Europe:

Poland, which was the largest country in Europe still in the 16th and 17th Centuries is the only one who invaded Moscow on the front Russia but after 2 years we gave up the guy and he was overthrown to take the country into their own hands. But over 125 years Poland disappeared from the map of Europe. Many nations disappeared in the history, if you look back, nations disappeared and dissolved under the circumstances. Poland did not. Actually, I think we have pretty high resilience not to dissolve after 125 years of being occupied. It is because we have a collective national ethos for sure and willingness to fight, constant in Poland there's constant uprising whenever someone is occupying us. Of course, I should also mention that we were invaded by the Swedes and Turkey and everybody around in our history and we always survived as a nation. The side effects of the 125 years of occupation, which ended with the 1st WW, when Poland began statehood, the side effects, and this is a completely different aspect of discussion which I don't want to open here now, but I want to mention and make a point of that, that under heavy long lasting oppression the resilience of nations, also results in more national ethos. Until the end of the 18th century, when we lost our country. We were one of the most tolerant countries, we were a multi-culti, a melting pot, when huge population of different nations living in the Polish territories. There was not quite unity or equality between them, equality was rather an abstract concept in this time. But still there was a lot of ..., and they were all considered part of the Poland kingdom. It was not by mistake that the Jewish population in Poland was so big because they were expelled from France and Spain and elsewhere and they could come and live in Poland. But 125 years of occupation resulted in sticking of the society and nation to the core values which created the Polish ethos. One of them was being catholic.

The Role of Catholicism in Poland:

Before, we were Catholic, Protestant, Jewish, we had a Muslim population living in Poland since the 16th century, the Tatars who were invading us all these centuries but then started to live in Poland. So, this ethos, to be Polish, was based around national language, national literature and art, and Catholicism has become the national religion. And that was the core values, and constant willingness to fight. Speaking as a private person, I think the Polish were really stupid fighting all these fights, our freedom, we say, from time to time, just keep ours. And we don't fight for f... or other from our history, against Russia and Turkey and so on.

Now, coming back to the topic. This is another element of discussion that may be interesting. How the national resilience under long lasting oppression results in

growing nationalism. That question can also be addressed to Israel, it can also be addressed to China, to any country. Speaking as a private person, I observe growing nationalism among the Chinese people. There are some examples of that. Especially young people. When there was growing tension with Japan several years ago, the polls asked how many Chinese people would like to see a military solution and it was almost 70% of the society, mostly young people, people who do not remember what is war. Older Chinese who remember war and the atrocities of war and were less keen on looking for a military solution. But the young people who just graduated university and are proud of China as the fastest growing nation and country. For years they thought well, we are poor people, we cannot afford to go on war. So that's another interesting question. But coming back to this historical element, just to close, during the 2nd WW Poland was the largest underground military resistance movement in the history, and that was 6 years of fighting against Germany and the Soviets as well, occupying Polish territory, and with a high level of losses, etc. It is also the country where the level of killing was the highest, total annihilation of the Jewish population, but also Poland lost over 6 million people during the 2nd WW, out of 36 million population. Every 6th person was killed. About half of them were Jewish Polish citizens, and the other half were Polish.

Willingness to Die for Country:

Nowhere else was this level of terror, of occupying power so high in the same time the number of people in underground military organizations, the resistance, was never so high. We were executing high ranking officials for being responsible for atrocities. There were underground publications, newspapers, underground administration, underground judgment system. The leaders executed by the resistance they were judged, they were taken to the underground court personally and there were legal procedures to prove that they were responsible for atrocities and therefore need to be executed as war criminals. So they were killed by partisans, but from a legal point of view they were executed by underground court. So, I will say that the leadership was a weak part but the Polish people were always ready to fight and die for their country. For this ethos, concept of their country. This also was somewhat continued after the war, when we were living in a system controlled by Moscow, imposed on us, the Polish people never stopped resisting the system. We had social unrest on a large scale, in 68, in 70, in 80, 86, 88, 89. Every time people were killed and the Polish people never stopped resisting, against the things that did not fit our national ethos, our national values, our system of beliefs, so as a result, I'm saying that this analysis by Lewis is interesting, but I'm ... we have missed something, not being successful in the 2nd WW,

but you need to take into account the weight of the external factor. Fighting with the Germans and Russians was not...

To What Level Can We Teach Resilience?

But the interesting question has to do with the comments made by Dr. Gal and all the speakers. To what level can we teach social resilience? On the community, national level, and which are the important factors. I wrote for myself, listening to your discussions, 6 elements, or 3 pairs of elements.

- One pair of elements, which are not contradictory, but show different poles of continuum is that of leadership and self-organization. If you look at the societies and the communities, you can look at them from different perspectives. But let's say that there are groups, communities, which require very strong leadership to take actions. And there are communities which have a higher ability to self-organize themselves without strong leadership. So this can be seen as a kind of continuum where, on the one hand, a strong leadership, this very important part, and in the case analyzed by Dr. Gal you can see that strong leadership helps the resilience of the nation, the strong authority. People like to follow strong authority. So it is good to have it. But on the other hand, if you look at societies, if they don't feel the strong leadership, especially in the low level, cities, if they are taught to follow orders, to follow authority, to follow instructions, and there is a severe situation and there is no implementation coming from the leadership, these people are unable to self-organize themselves. This is like prof. Manzu said that China has contingency plans for different situations. The question is can these plans be implemented without leaders making 30 second decisions, and being there on the spot and directing people. Can people get organized themselves, if they don't have this individual present at the spot and giving them orders.

The point is if you want to have a society that is self-resilient they need to have this ability to self-organize themselves. Of course, again, can they be trained? Yes, they can be trained to a degree. It does not work without other elements, without ethos, common beliefs and the optimism. But it can be trained.

But the training is not writing.

Reuven Gal: Self-regulation is a source of resilience.

Tadeusz Chomicki : Yes, you're right this is also what I know. If there is a disaster happening locally in the US, sometimes you can see a lot of people getting organized. They will do their best, because they know that someone is flying from Washington,

visit here and go there. These people don't know the local conditions. They are seen as overtaking power from the level which has nothing to do with their real lives.

It's not a theory, just an observation.

- Then the other pair of terms that I wrote down is **individualism vs. collectivism**. Nations are different by their sizes and are different by the level of individualism and collectivism and again there is no black and white picture. There is no good or bad resilience if it is based on very strong individualism and on very strong collectivism. Collectivism should be better for self-resilience, groups and communities and probably is, but there are still limits. Where is the limit? Collectivism also need leaders so collectiveness in itself is not a value, if the community has no ability to organize itself. Based on very strong hierarchical power. China has 1000 years of tradition, a hierarchical system of power, of authority and is very collective, in a way. China is very collective, this is my personal observation.

Sometimes I see that the Chinese society is very collective, but the Chinese individualism is very individual, so I cannot judge it really, because I don't know enough about it, but, again, between individualism and collectivism we can also measure self-resilience of groups. One important term along this line is solidarity. Solidarity of the community, this is a key element. Again, what was different in Poland and in many other countries in central and Eastern Europe in our ability to be resilient in a system which came to us by itself after the 2nd WW was the solidarity of people. The most important social movement in the history of modern Poland was the movement called Solidarity. It's a trade union the whole society that was never organized before.

- And finally, the last element is the **active and passive** element. And so you need a certain level of active attitude to work in crisis and not a passive attitude.

If you draw these three axes randomly, I see them merge together if you want to describe the communities and the members of these communities to build self-resilience, resilient communities.

And again, the final question is the first question that we asked, **how much and to what extent can you teach that to the people, to train them**. I think it is possible to train them. Like we discussed in the coffee break, if you are not a leader, you cannot be trained to be a leader, you can be trained to become a super candidate for the most powerful position because you followed the rules of the game. You can win polls, you can even win votes, and if you play by the rules, develop with the media, you can become the best show man, but are you the best leader? This is another question.

Leadership is a quality that real leaders are born with but still they need training. Self-resilience I think is easier, in a sense. It cannot be totally taught. It's not something that we can learn and then be self-resilient as a group, but training can improve the abilities of the community.

The Israeli experience shows that training people in reaction to specific threats, which of course, include survival of the community, water supply, hospitals, etc., but it comes from a military threat. I think it resulted also in increasing the resilience of Israeli minds and attitudes as Dr. Gal has shown in his presentation. Through the exercising they developed the mental attitude which other crises that are not subject to military training.

List of Participants and Invitees

	Name	Organization
1	Reuven Gal	Samuel Neaman Institute, Technion
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4	Qidi Wu	Formerly Vice Minister of Education, PRC
5	Einar Tangen	Design Group International, Beijing
6	Amir Eshel	Israel Military Attaché to China
7	Tadeusz Chomicki	Previous Poland Ambassador to China
8	Jorge Heine	Chile Ambassador to China
9	Tau'aika 'Uta'atu	Tonga Ambassador to China
10	Fan Ting	
11	Bai Yan	
12	Christy Zhang	General Manager China-Israel Entrepreneurs Club
13	K.J.M Varma	China Correspondent
14	Na Guoyi	Peking University
15	Yi Liu	Tsinghua University
16	Rui Yang	Tsinghua University
17	Jing Qian	Tsinghua University
18	Yi Liu	People's Public Security University of China
19	Wei Xu	Renmin University of China
20	Zhidong Cao	Chinese Academy of Sciences
21	DanhuiGuo	Chinese Academy of Sciences
22	Juncheng Chen	Beijing University of Technology
23	LijuanDuan	Beijing University of Technology
24	Xiaolin Zhou	Peking University

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