Feinstein International Center
Strengthening the humanity and dignity of people in crisis through knowledge and practice

Opinion Paper

Complexity and Context as the Determinants of the Future

By Peter Walker

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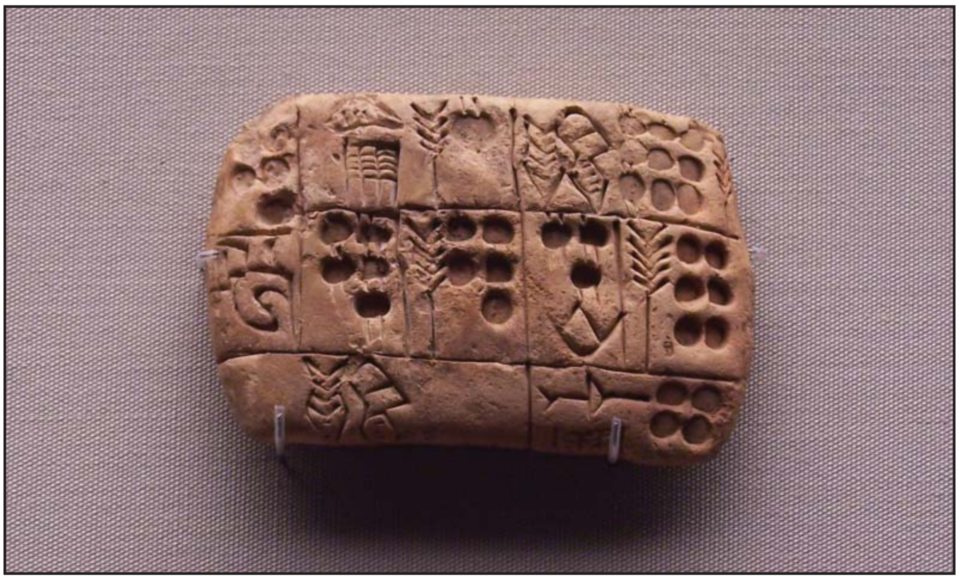

Cuniform “food security assessment,” 3,500 BCE
Photograph by Peter Walker

In the beginning

5,500 years ago a minor official in a town in Mesopotamia sat down and, in the first known form of human writing, pressed into his clay tablet symbols that expressed the expected crops from the area around the city that year and the expected grain consumption. This is one of the earliest know records of human writing, and it records a food security assessment: we have been in the humanitarian aid business for a long time.

Fast forward to New York, 1931. Another city, another old recording of crisis. Film footage of the time shows the greatest economic engine on the planet gradually grinding to a halt. Massive unemployment cripples the city. What looks today like general ration distribution and supplementary feeding of children is taking place on the street corner. An old man tries to hawk four oranges, and kids pick over the garbage – coping mechanisms in today’s parlance. And in Central Park a “Hooverville” shanty town of the dispossessed grows up. An IDP camp in the Park.

The crisis that enveloped New York was not predicted. It came on gradually and

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The Feinstein International Center develops and promotes operational and policy responses to protect and strengthen the lives and livelihoods of people living in crisis-affected and -marginalized communities. The Center works globally in partnership with national and international organizations to bring about institutional changes that enhance effective policy reform and promote best practice.
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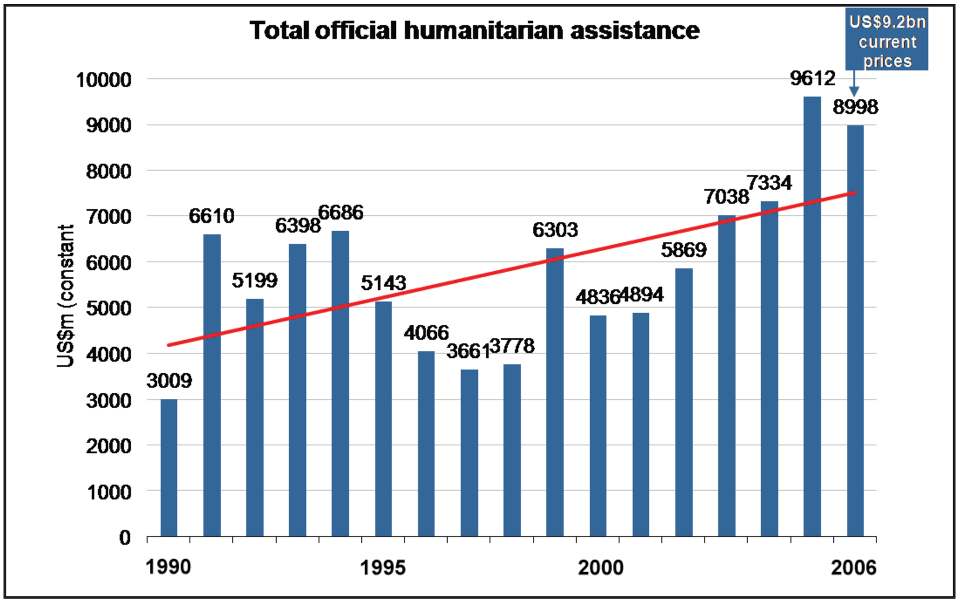
then suddenly tipped from an irritant to a nightmare. The lesson: no society is immune from catastrophic shock. These shocks are often unpredictable and when they come government needs to react fast, or fail.

The critical question we need to ask as we enter the 21st century and the realization that global processes, around climate change and economic liberalization are shaping our future is: are we ready to deal with this? Unfortunately some of the major changes in the humanitarian market over the past decade suggest otherwise.



Growth in official funding of humanitarian aid 1990-2006. Source: Development Initiatives. *Global Humanitarian Assistance Report 2007*

Afghan teachers, skeptical of the competence of aid agencies

Photo by Antonio Donini

The dark side of growth

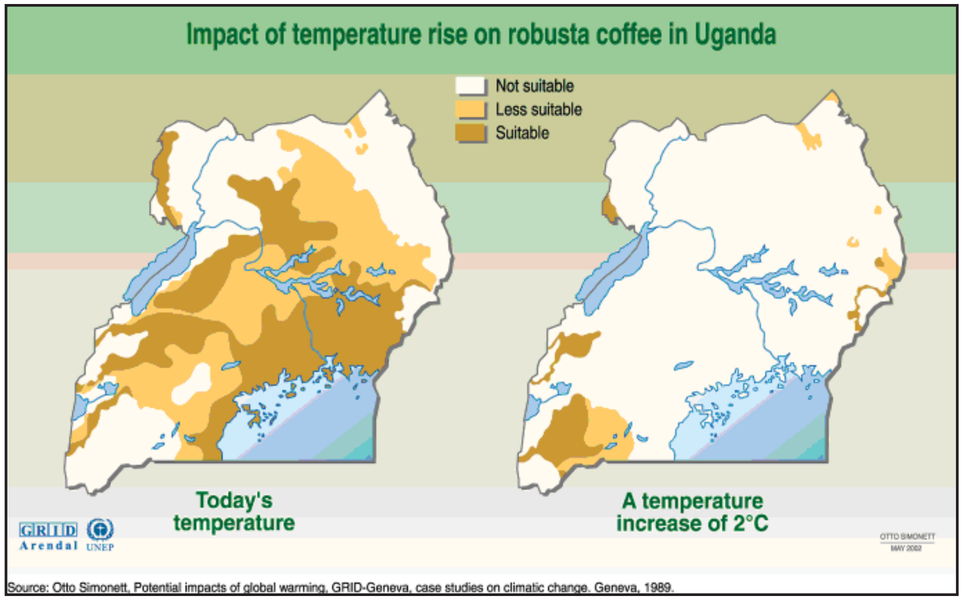
The 1990s and the first half of the 2000's witnessed a tremendous growth in global humanitarian assistance. Up from around $3 billion annually in 1990 to over $9 billion in 2006, as far as official OECD/DAC figures show.

At the same time, research suggests that the number of people employed worldwide in the humanitarian endeavor has gone up from around 140,000 to 240,000. In other words humanitarianism is a growth industry, but it is this very "success" that has brought problems.

All endeavors, when they expand rapidly, face common problems. Whether you are the CEO of IBM or Toyota, or the president of a larger humanitarian NGO, growth presents opportunity and threat. The threat is that you will lose control of your organization. It will grow so rapidly that you no longer know what's going on and you no longer direct it. Faced with this threat, enterprises react by putting in place control and accountability systems; they button down the organization. In the 1990s the humanitarian enterprise reacted in this classical fashion, tightening its financial accounting and reporting procedures, putting in place the Sphere Standards, developing standard operating procedures and so on. All good, worthy, and entirely necessary moves to harness the beast of growth. But this is only half the story. The other half is told at the field level, at the cutting edge of humanitarianism where aid worker meets crisis victim. Here, the victim, the dispossessed family, and malnourished community is not interested in the systems' standards and accounting. They want a competent solution that fits the nuances of their crisis at that location at that time. Context is everything. Tailoring to context is the other half of dealing with the growth threat.

There is evidence that many agencies are having a hard time providing this nuanced service.

Recent research in Afghanistan shows that poor accountability, and bad technique and behavior are the greatest causes of mistrust and discontent between aid agencies and assisted communities. In east Africa, aid workers shy away from measuring the impact of their work:



Source: Otto Simonett, Potential impacts of global warming, GRID-Geneva, case studies on climatic change. Geneva, 1989.

"It's better for us not to measure impact or attribution, if we were to discover that we were having little or no impact, it's better that we don't know about it."

In Ethiopia an aid manger is brutally honest about the constraints generated by the system:

"As a project manager, I have a contract with HQ to deliver on the performance indicators of my projects, and in reality, failure and not delivering what I have contracted to is unacceptable."

While there are agencies that invest in growing the competence of their field staff and put authority into the field--and expect programs to take risks and change to meet the known needs of the community rather than deliver the contracted deliverables of the grant, they are not in the majority. This is deeply worrying because all the evidence of how the global processes of climate change and economic liberalization (globalization) will play out suggests that their impact will be extraordinarily context specific. They play into a complex system with unexpected feed-backs accelerating processes, with phase-changes causing sudden shifts in process direction and with the effect of individuals' decisions being magnified as the system moves forward. It's a cliché, but being able to think globally and act locally is precisely what the future is about.

Future shock

Donald Rumsfeld, the former US Secretary of Defense, had a phrase to describe how he saw the future. He talked of "A new strategic landscape of manifest uncertainty, of fundamental and catastrophic surprise." Yes, we will still have the expected annual floods and cyclones. We will have the expected but less predictable earthquakes and famines, but the future will bring more of the unexpected, like the tsunami of 2004, or the near-famine in the UK of 1947.

In that winter of 1947, the weather was so severe that the rail system froze and coal could not be shipped to the power stations. One by one they shut down, and post-war industry ground to a halt. Food production was drastically down and global food prices peaked, bucking the downward trend of the last 25 years. The US held out on giving the UK loans to rebuild, waiting, some would say, until they were sure that the old imperial economy and the "New Jerusalem" of the elected socialist government was sufficiently crippled that it could never pose a threat to US economic expansion. In that year the UK government drew up plans for dealing with mass starvation in the country. They were never used. The loans came through, just in time, and were finally paid off in 2002.

The point of this little cameo is that no one predicted this crisis. It just tumbled out of happenstance: a manifest uncertainty, of fundamental and catastrophic surprise.

As we look to the future and we predict the gross effects of climate change and globalization, we should expect to face more of these catastrophic surprises.

Climate change, glacial melt, and political control

Take Bangladesh. It is reliant on the water that flows down the great rivers of the Indian sub-continent. Most of those rivers originate in the Himalayas and are largely dependent on the supply of glacial melt water. We know that the melting of those glaciers is accelerating because of global warming and that, in thirty to fifty years, the glaciers will be no more. This means that for the next generation Bangladesh faces a future of increased seasonal flooding down its rivers as the glaciers pour out their contents. But at some point the melting will cease and in a very short period of years what was once unexpected seasonal flooding will turn into unexpected seasonal water shortage. Add to this the effect of the entirely predictable rise in sea level which will push storm surges further inland inundating vast portions of the country. This accumulated series of shocks will have a profound effect on Bangladesh's agriculture, its economy, and its politics. The critical question to ask is, how will the government react? With fear, control and oppression or with empowerment and context specific solutions?

Across the Indian Ocean in Uganda, a two-degree rise in annual average air temperatures is predicted to devastate the coffee crop. Basically Uganda will cease being a coffee-growing nation. It will lose 25% of its annually international earnings and a massive portion of its domestic economy. How will the government react, with fear and oppression or with enlightened empowerment of its people?

Nations' historical records on this are not encouraging. Recent research looking at the period we know as the "little ice age" (1500 to 1750) when Europe experienced a sudden decrease in annual average temperature shows that that decrease correlates beautifully with an increase in conflict, which fades away as the climate settles down and becomes more predictable.

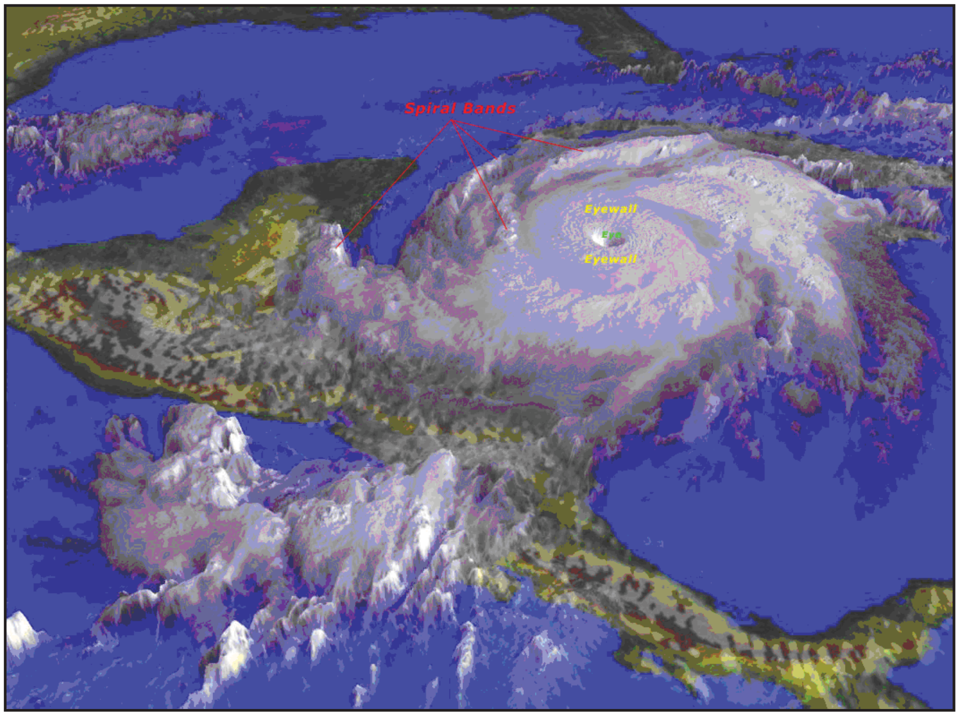
Globalization, the dream or the nightmare?

As we enter the present period of accelerating climate change, we are also seeing the rapid expansion and integration of our planet's economy. This too is bringing unexpected changes: some worrying, some exciting. The spread of commodity chains raises the potential for producers in marginal lands to access profitable markets overseas and increase the value of their pastoral cattle herds. The spread of mobile phone technology and the extraordinary innovations its users in the south are driving are allowing for remittances to be sent home more cheaply, for local markets to become more integrated and for human rights violations to be more systematically reported.

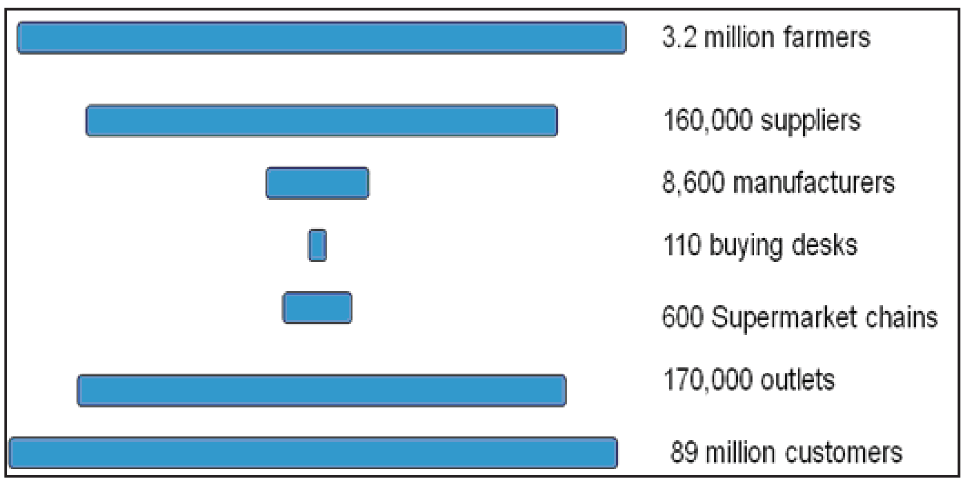
At the same time, the desperation and chaos of disaster are increasingly being seen as an opportunity for corporate expansion and acquisition. Following Hurricane Mitch in 1998, the Honduran government privatized its air and sea ports, telephone, and electricity. It overturned land reform law, allowing massive foreign ownership, and systematically lowered environmental protection standards, all moves which it and the corporations that benefitted, could never have pushed through in a period of normalcy.

As the Foreign Minister in neighboring Guatemala said at the time "Destruction carries with it an opportunity for foreign investment."

In the Chiapas region of Mexico in 2004, heavy rainfall led to massive landslides. The Mexican government offered local farmers a rehabilitation package – but at a price. The Chiapas region is the genetic homeland of maize. Over twenty native and original varieties are gown here, nuanced to the local environment and grown on small scale farms primarily to feed the rural population. The government offered rehabilitation packages – if the farmers would switch to palm oil production: no switch, no help. Palm oil has the potential to produce up to 6,000 liters of diesel fuel equivalent per hectare. Only you can't eat diesel, and the profits from refining palm oil to diesel do not flow to the farmers but to the companies that supply the fertilizers and pesticides, and that process the crop and distribute the final product.



Hurricane Mitch demonstrated disaster as an econonmic "opportunity"



Producers and consumers, linked by all too few controlling corporations. A very un-free market. Source: Patel 2008. Data for UK, France, Germany, Netherlands, Austria, Belgium

It's not that the free market is inherently bad for farmers (or consumers for that matter); it's that the market all too often is not free. All too often the mass of producers and the mass of consumers are connected via a processing and distribution system controlled by an amazingly few entities, providing an hour-glass shape to the market.

• At the wide top the producers, say farmers, around the world, who have been shown to consistently make little profit from their crops and who suffer worldwide from a higher suicide rate than their urban cousins;

• in the middle the manufacturers, buyers, and supermarket chains, where profits accrue;

• and at the bottom the consumer who gets cheep food, but food which is increasingly unhealthy, bereft or any real choice, and fuels the fastest growing cause of early death and heart disease in the world: obesity.

It's about relationships and trust, not structure or rules
Photo by Andrew Catley

Under the old world trade system, a sizable portion of our planet's population existed outside of the global economy. They were subsistence farmers, or traded in locally self-contained economies, or relied upon the community and social welfare nets of the state, the NGOs, and the like. This billion or so of the world's poorest are now not so disconnected. They are now part of the global system. They are the new market for major banks moving into the micro-credit arena, "blazing the trail of consumer credit" as one banker put it at a recent conference. Do they enter the global economy with a future-possible of opportunity and expectation or of exploitation and oppression? The future is not pre-set, but we have to make it happen. We will push it down one or the other course.

Complexity and context

These world-wide forces of climate change and globalization will play themselves out in unexpected and unpredictable ways. We see this it in the recent food crisis. Looking back one can speculate that it had its roots in the double-year failure of the Australian wheat crop. Add to that the transfer of 20% of US corn production from the food chain to the ethanol chain, build in the acceleration in meat consumption in China, and the speculation and instability enabled by the hourglass global food trading and processing system and the propensity for sudden and unpredictable rises in food price becomes apparent, but only after the fact.

Or switch to the micro-environment of Karamoja in northeast Uganda, where decreased water and pasture availability driven by climate change, along with increased availability in small arms, is fuelling traditional cattle raiding between clan groups. Only now, with the advent of cell phones and a global market in cattle, less scrupulous businessmen in Kampala are placing text-message orders with Karamoja youth to raid cattle to order for the international market.

So we see the highly context-specific way these global trends play out. And unless aid agencies are able to tailor their protection and assistance to suit each location and time-specific context, unless they are able to adapt to this rapidly changing landscape, they will inevitably fail in their humanitarian mission.

Smart adaptation

If that is the diagnosis, what is the prescription? What can agencies do to position themselves to serve the vulnerable and dispossessed of the future?

First, they have to let go of their old comfortable linear models of change. Doing tomorrow what we did yesterday is no longer an option. The future is inherently unpredictable and we have to get used to that. It means re-tooling organizations, and by extension states, to be far more adaptive, flexible, and open to acting upon feedback.

Agencies must come to terms with the nature of complexity and its implications. They need to rebuild the balance between their good efforts to develop standards and accountability and their urgently needed efforts to program to context. To do this they need to become obsessed with measuring program impact, both intended and unexpected, not simply measuring process as so often happen in today's evaluations. If you can't assess the impact of your work you have no way of knowing if you are programming to context and no way of setting up a positive feedback loop to reward learning, competence, and risk-taking.

Tufts/FIC experience carrying out action-research with local farmer's and cattle owner associations, along with aid agencies and government ministries suggest that the institutions we create can change to become flexible, more adaptive, more in tune with the complexity and context of their work. We would urge a focus on four drivers of change.

First, understand that it is relationships between individuals, not structures and reporting trees, that create learning, adaptive organizations. Of crucial importance to the humanitarian business are the partnerships that international agencies make with local organizations, citizen groups, and the like in the crisis-affected areas where they seek to deliver service. These partnerships are particularly problematic as they happen across such large power imbalances. Often the international agency has the money and the political power (or at last impunity), but the local agency has the local knowledge so essential to understanding and acting on context. Somehow, a relationship of mutual trust, responsibility, and accountability must be created.

Second, experience tells us that change in organizations is driven by individuals, at all levels, and that we all respond most positively to what we may call evidence-driven narratives. It is not the massive reports that change people's minds, or the threats or sweeteners, it's the stories they

Evidence driven narratives make all the difference in changing attitudes

Photo by John Burns

can understand and relate to. If these stories are driven by objective evidence that the listener or reader can understand and relate to, the success rate of the narrative goes up. Agencies, from their situation reports, their evaluations, and their commissioned research can craft these narratives. They can be delivered as briefing documents, as flash videos over email, or better still in-situ where those who need to change their opinions or build the courage to act are brought into the environment we want to effect. This brings us to the next change driver.

Third, change requires momentum and mass to reach the tipping point where "yes but" turns into "yes and". Working with local communities to better understand crisis has to go hand-in-hand with working with the agents of service and change in the crisis area, be they extension workers, local politicians, landlords or warlords, and this has to be accompanied by the use of narratives with national politicians, corporate boards, or key religious leaders. Lobbying only at the top, or the bottom of the power structure, does not cut it.

Finally, change, in human and natural systems, is driven by positive feedback. Reward the behaviors you want to promote and promote these behaviors where they make most difference. Force decision making, competence, and responsibility closer and closer to where your product, your service, has effect. The brilliant surgeon stays in the operating theatre, the lawyer in the courtroom, the engineer on the project. Promote to, not away from, the field. Require rotation between management structures and field practice. Reward risk taking, innovation, and impact, not compliance with procedure and grant yield.

Teaching the elephant to dance

If you want an analogy to guide your thinking, imagine your organization as an elephant: a big, powerful lumbering beast, very good at charging in a straight line. Now imagine teaching your elephant to dance, to be nimble, to adapt to the ever changing environment, to be ever listening to, and for, the changing context of service.

That is the humanitarian agency of the future, the agency best able to cope with the complexity and context of the consequences of climate change and globalization.

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