

Keynote Remarks at SPARKS Innovation Summit and Cybertech Global

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Many thanks, my dear friend, Dr. Yossi Vardi, for inviting me to speak here.

Mulling over the question of what to do in the allotted time, I decided to split this keynote into two parts. The second one will be on a particular piece of real science – a rather difficult “grand challenge”, but one that has numerous cool potential applications.

However, I cannot refrain from spending the first part taking about the devastating situation unfolding in Israel, which is already having frightening consequences on the democratic fabric of our beloved country, on the subtle relationships between the constituents of its diverse population, and indeed on its very chances of surviving.

It is not for me to speak about the horrific Hamas attack on October 7, and to point to those who are to blame for it. Neither will I talk about the unbelievable saga of the 133 hostages, so many of whom are no longer alive, or about the shocking magnitude of the ruin and killing that characterize the “war of revenge” in Gaza.

These are covered daily by many people, far more knowledgeable and eloquent than I could ever hope to be.

Still, I do share with many, probably the majority of Israelis, the strong opinion that the present government simply has to go – one way or another. And the sooner, the better for us all.

What I will do, however, is to zero in on a very different kind of activity that this government is busy at, which is directly relevant to the participants of this conference and is also already having grave outcomes.

I am worried – nay, deeply and greatly worried! – about the negative impact the situation is already having on Israel's science, in its broadest sense, including the natural and exact sciences, medicine and technology, but also the humanities, education and culture. I am resolved to stand up against vicious governmental actions intended to make things even worse.

Suffices to mention the many attempts at hostile takeovers or deliberate weakening steps, against such revered institutions as the National Library, Yad Vashem, the Council for Higher Education, The Volcani Institute, the Israel Prizes, and on and on. Several of these were initiated by the Minister of Education, but other people are deeply involved too.

I have been spending an unusually large part of my time fighting these, and thanks to the efforts of many, some have indeed been mitigated or stopped. Still, as we speak, new ones pop up continuously.

And this, ladies and gentlemen, cannot be allowed to continue. Hence, let me be very clear: Obviously, in order to survive, Israel needs adequate military strength and prowess, and a strong deterrence factor. However, there is no point in surviving, without front-line science, technology, art and culture.

Why, you may ask, is the government doing what it is doing? There are a number of possible answers. One is strength and control, or to paraphrase Minister Miri Regev's beautiful statement: *"What are science and culture worth if we don't control them?"*

The second reason is rooted in ignorance. Ignorance regarding the importance of basic and applied scientific research, of critical thinking and logic, of academic freedom, and of creative and independent work in the humanities, the arts and the social sciences.

Such ignorance is, of course, closely related to the rise of religious fervor, around the world in general, and in our neck of the woods in particular.

Richard Dawkins takes a rather extreme position on this, asserting that believers are victims of their religion, and that faith undermines the power of education, science, and rationalism.

Even Charles Darwin himself wrote:

"Ignorance more frequently begets confidence than does knowledge: it is those who know little, and not those who know much, who so positively assert that this or that problem will never be solved by science."

A few years ago, our Minister of Finance openly dismissed a central scientific dogma as “a farce”, and sarcastically questioned the need to investing adequately in higher education.

Is this a case of ignorance begetting confidence?

Perhaps. However, my concern is not the ignorance itself, but the harm that it may very well cause. Suffices to remember that the Ministry of Finance is the body that, among many other things, is tasked with allotting the government budgets for Israel’s research, scientific infrastructure and education.

Ignorance rears its ugly head – with potentially outrageous implications – in many arenas relevant to this conference. Global warming, one must state clearly, is not a farce either, as some may have you believe; and the climate crisis will not be solved through magical or religious practices: not by חוּנֵי הַמַּעְגָּל (Honi the Circle-

maker), nor by the rituals of the Iteso tribe in East Africa. Similarly, future pandemics will not be eradicated by Version 2.0 of the copper snake (נחש הנחושת) or by various Christian liturgical processions.

Since the situation is going from bad to worse as we speak, let me return for a moment to my earlier statement that this government must simply go, but now from this different point of view.

We all heard Brigadier-General Dan Goldfuss saying “*You must be deserving of us*”, (“אתם חייבים להיות ראויים לנו”), where by “you” he meant the government and by “we” he meant the brave forces fighting in Gaza (which, on a personal note, included my two eldest grandsons...).

Let me borrow his desperate call, and use it on a less life-threatening front, but one that is as crucial for our survival as a state and nation:

You [the government], must be deserving of us [those who do science, develop technology, and further knowledge and culture]

And if you are not, please go, and leave us to lick our wounds and start the vast rebuilding process so direly needed.

But enough about all that. This conference is intended to be exciting and eye-opening, and while it is our duty to sound the warning, we do not have the privilege to lose hope. This was put eloquently by one of

history's most revered champions of freedom of all kinds: Martin Luther King, Jr.

"We must accept finite disappointment, but never lose infinite hope".

This ends my Part 1, and now to some actual science.

[Here I spoke about the research I've been conducting with my group at the Weizmann Institute over the last couple of years, on extracting and analyzing multi-level information from prosody, the music of speech. . . .]

Thank you!