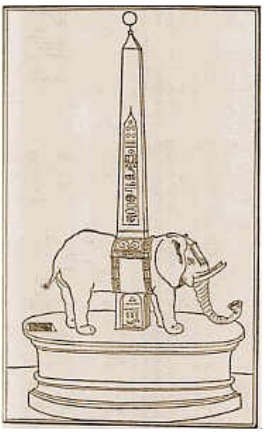
UNDER THE BAOBAB

Essays to Honour Stuart Saunders on his Eightieth Birthday

Philippe-Joseph Salazar, Editor

THE ELEPHANT AND THE OBELISK, I
a Special Series and an Imprint of the African Yearbook of Rhetoric
Vol. 2 No. 2 , 2011



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AfricaRhetoric Publishing

African Yearbook of Rhetoric, Vol. 2 No. 2, 2011
Special Series: The Elephant and the Obelisk, I

This volume, placed under the Editorship of Philippe-Joseph Salazar,
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Edition limited to eighty copies.

No. .....

Printed by:
The INCWADI Press
PO Box 293, Newlands, 7725
Cape Town
Republic of South Africa

Publisher:
AfricaRhetoric Publishing
PO Box 677, Melkbosstrand, 7437
Cape Town
Republic of South Africa

ISSN 2220-2188

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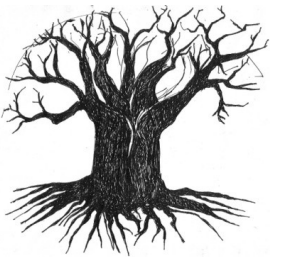


A NOTE FROM ANITA

By Anita Saunders

A man can achieve a lot in eighty years and then find himself somewhat elevated at the end of it, both in the sense of being looked up to and praised (usually for his wisdom) and also in the sense of being able to survey the landscape of his life from the dignified heights of experience. The level of the viewer is actually not important because it is, after all, a landscape shaped in the mind where the narrowing lines of perspective drive inwards, back into the past, until the vanishing point truly disappears in the time before words — looking back is made difficult because the topography of the past changes whenever a different mood washes over it. But that should not matter. What is seen and how it is seen is private when it comes to memories, though others may guess that a promise of tender green was brushed in over a bleak plain and that a scorched patch was shifted a little further to the right and then more so, almost out of sight. It is only human to make a few adjustments to one's own landscape and, in the past twenty years, many arid areas were turned into very pretty gardens where culture and the cultivated blend harmoniously.

However, there are those, like Stuart, who believe that to change a single detail is to risk throwing the whole scene out of focus. And while it is not in Stuart's nature to dwell on the rough patches of his journey, he will not airbrush any part of it out. To do so would make Stuart uncomfortable and Stuart likes his comfort. That is why he has chosen a comfortable position, wedged into the fork of a baobab tree and with his back resting against the trunk — to wait for the next chapter of his life to begin. It is an entirely appropriate perch for a Grand Counsellor of the Order of the Baobab, silver class.

Baobabs, like elephants, are symbols of Africa. Both are large and long lived and are venerated by those who assume that memory relates to wisdom. This is probably true of all elephants and a few humans but not of baobab trees which do not need to remember where they came from because they grow very very old while remaining in exactly the same spot. There is a baobab tree in Limpopo, South Africa, which has

been carbon dated as being older than 6 000 years of age, no wonder that they do not bother to produce annual growth rings. As for celebrating eighty years, this would pass unmarked and unremarked in a baobab's life, although it is certainly fine for Stuart to celebrate his — in and on and with, reference to baobabs. He is, after all, a kinsman and an honorary member of their clan.

When Stuart was inducted the speaker added praise for the nurturing role of baobabs to the list of their good qualities such as long life, memory and deep roots in the African soil. It is true that, while not providing a cradle for mankind — we don't want to go that far back even if his ancestors had little feet — baobabs have, for thousands of years, provided an edible fruit rich in vitamin C and with a calcium content which exceeds that of cows' milk. The fruit pulp is known as 'monkey's bread'.

Apparently it is quite awful. It is so awful in fact that it is said that the taste of the baobabs' fruit displeased God so much that he turned the tree upside down, resulting in the odd shape we now know.

High in the branches of his family tree Stuart is related to a miller and also several generations of good publicans so he fits in well with the nurturing baobab clan, though his ancestors were all upstanding, upright people. The Saunders clan are known to be independent spirits. Like the baobabs, they stand alone even when forming part of a group. Baobabs do not weave their branches together to form canopies and interdependent arches.

They could never inspire a vaulted cathedral or even a green thought, but they are grand in their own way as they open their crowns to the sky to welcome a parliament of birds, a few monkeys and any passing vice-chancellors.

Long before the baobabs found Stuart, he claimed membership of the elephant clan based on a myth which we chose to believe because we loved elephants and the idea of their caring society.

Stuart too, had a number of aunties to watch over him when he was young. He repaid their kindness by signing them all up for the Ovaltine Club on radio Lourenco Marques (now Maputo). According to the myth, the link between the Saunders family and elephants was forged when Stuart's ancestors heeded a call from Alexander the Great for support in battle. They fought valiantly and afterwards Alexander granted them the right to call themselves Of Alexander (El Zander — Sanders — Saunders) and to use the elephant as their family icon. In time the descendants of this tribe moved through Europe and, according to a footnote for the same myth, they were in Normandy in 1066 and took part in the crossing and all that. There is something familiar about one of the figures in the Bayeux tapestry. However, the Saunders tribe did arrive in England eventually and their descendants ran a good pub halfway between London and Oxford. Since then it has always been touch and go whether a Saunders would become an academic or a publican. Being a good host is part of the job description for both occupations.

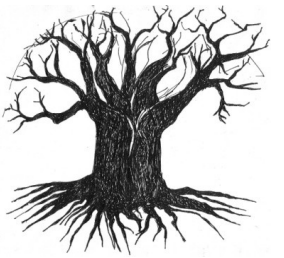
Since membership of the elephant clan was assumed without ceremony, it was a great honour when the Kruger National Park named a big tusker 'Alexander', in Stuart's honour. Alexander is no longer with us, but his tusks are on display at Lethaba and his spirit has joined the elephants lined up on the horizon, facing the mighty baobab where Stuart lazes with his stash of pistachio nuts.

It has been a long day with friends and colleagues and one of Stuart's teachers, a famous professor of medicine, arriving at intervals since the first light of day. They followed different routes to get here but all of them crossed Stuart's landscape and he tracked the route of each one as they approached, remembering a shared history. Some of them came from far away and long ago and seemed to appear out of the haze of distance.

They arrived one by one, each one bearing a gift of words. If they had been medieval knights they would have arrived on their chargers with colours flying to honour a friend on his birthday by jousting and bleeding and breaking their bones falling on the ground. If they had been courtiers of a later period they would have powdered themselves

all over and arranged to dance in a complicated pattern with pointed toes.

But these are different times and they are academics, thinkers and critics used to palaver, who have come to honour Stuart by flying their colours and putting their best foot forward as they present their latest, their brightest thoughts under the baobab tree.



THE FRAGILITY OF RIGHTS

By Arthur Chaskalson

"Obsequious and servile spirits are the worst guardians of people's rights".[1]

John Warr was writing at the time of the English revolution, three hundred years before the adoption by the General Assembly of the United Nations of the Universal Declaration of Human Rights. In the introduction to their publication of his writings in *A Spark in the ashes,*[2] Sedley and Kaplan refer to Warr's "appreciation of individual worth" and how he develops from this "the entitlement of people to overthrow a government which has broken its compact with the people and turned to tyranny".[3] We hear an echo of this in the preamble to the Universal Declaration, which begins with the claim that "the inherent dignity and …the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world", and goes on to proclaim that it "is essential, if man is not to be compelled to have recourse, as a last resort, to rebellion against tyranny and oppression, that human rights should be protected by the rule of law".

The Universal Declaration reflects the aspirations of the founders of the United Nations who sought to promote an international legal order in which there would be peace between nations and respect for human rights and fundamental freedoms for all people. Although the United Nations has had an important role in attempting to promote international cooperation, peaceful international relations, and an international legal order based on respect for human rights and fundamental freedoms, the aspiration

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1 John Warr, "The corruption and deficiency of the laws of England", in *A spark in the ashes*", Stephen Sedley & Lawrence Kaplan, eds. (London: Verso, 1992): 93.

2 *Ibid.*, n.1.

3 *Ibid.*, 5.

that there should be peace in the world and respect for such rights and freedoms has not been realised. We know from our own history how, for half a century after the founding of the United Nations, political power in South Africa was wielded oppressively to promote the interests of a small privileged group.

History, both before and after the time John Warr was writing, and since the founding of the United Nations and the adoption of the Universal Declaration of Human Rights, is replete with examples of aggressive wars, and unjust regimes. We know that this has happened at different times and in different ways in all parts of the world; that there will be resistance to unjust laws, and that sooner or later unjust regimes are liable to be overthrown by popular revolts. As I write this, we are witnessing popular uprisings and protests against the denial of freedoms and fundamental rights in parts of North Africa and the Middle East. What the outcome of these uprisings will be is uncertain; history warns us to be cautious. There have been more failed revolutions than successful ones.

Warr knew this. He warned that although the interest of the people is "the true and proper interest" of any commonwealth, corrupt interests, once having gained power, could advance themselves, "pretendedly to exalt this", and might succeed in doing so. For:

> He which hath the worst cause may sometimes have the best success, for time and chance happen to all, and thus liberty may be worsted by privilege as having less specious advantages in the flesh.[4]

We need to be conscious of this lesson of history.

Not long before the adoption of the UN Charter and the Universal Declaration of Human Rights, which he did not live to see, Franklin Roosevelt delivered his now famous "four freedoms speech", in which he said:

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[4] Warr, *A spark in the ashes,* 79.

> The basic things expected by our people of their political and economic systems are simple. They are: equality of opportunity for youth and for others, jobs for those who can work, security for those who need it, the ending of special privilege for the few, the preservation of civil liberties for all.

Importantly, Roosevelt considered "freedom from want" as one of the four essential freedoms necessary to achieve these goals. The others were:

> freedom of speech and expression, freedom of every person to worship God in his own way, [and] freedom from fear which, translated into world terms, means a world-wide reduction of armaments to such a point and in such a thorough fashion that no nation will be in a position to commit an act of physical aggression against any neighbour — anywhere in the world.

Freedom was not, however, limited to these rights; "freedom" he said "means the supremacy of human rights everywhere".

Though he was talking at a different time in a distant country, which since his demise has not always seen the world through this lens, his remarks deserve our attention. What they tell us is that freedom is not the preserve of those who can afford it; it is the entitlement of everyone. Without freedom from want, there can be no real freedom.

These are concerns of which the founders of our Constitution were conscious. In the preamble to the Constitution four primary goals are set. They are to:

- Heal the divisions of the past and establish a society based on democratic values, social justice and fundamental human rights;
- Lay the foundations for a democratic and open society in which government is based on the will of the people and every citizen is equally protected by law;
- Improve the quality of life of all citizens and free the potential of each person; and

- Build a united and democratic South Africa able to take its rightful place as a sovereign state in the family of nations.

Our Constitution provides the framework within which this must be done. The preamble sets the goals to be achieved. Chapter 2 of the Constitution entrenches a Bill of Rights, which:

> is the cornerstone of democracy in South Africa. It enshrines the rights of all people in our country and affirms the democratic values of human dignity, equality and freedom.[5]

The rights include fundamental freedoms such as respect for human dignity,[6] the achievement of equality,[7] the prohibition of discrimination,[8] freedom of expression,[9] freedom of association,[10] fundamental political rights,[11] and other civil and political rights. They also include social and economic rights which oblige the state to take reasonable measure within available resources to enable citizens to gain access to land on an equitable basis,[12] to have access to adequate housing,[13] to have access to health care, food, water and social security,[14] and education.[15] These rights provide the foundations on which our democracy exists. They are an essential component of an open and democratic society which is the framework provided by our Constitution for the achievement of these and its other goals. The state is required by the Constitution to "protect, promote, and fulfil"

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5 Section 7(1) of the Constitution.
6 Section 10 of the Constitution ("everyone has inherent dignity and the right to have their dignity respected and protected).
7 Section 9(2) of the Constitution.
8 Section 9 (3) of the Constitution.
9 Section 16 of the Constitution.
10 Section 18 of the Constitution.
11 Section 19 of the constitution.
12 Section 27(5) of the Constitution.
13 Section 26 of the Constitution.
14 Section 27of the Constitution.
15 Section 29 of the Constitution.

these rights.[16] It is our duty as citizens to ensure that the government does so.

Our rights based Constitution could have created the impression that with the demise of apartheid all had changed and that we were assured of a future in an equitable society. Indeed, for a time, that was the prevailing public mood. However, given our history of oppression and dispossession it was never going to be easy to achieve the goals we set ourselves in our Constitution. We have made considerable progress since the end of apartheid and our country is now a far better place than it used to be. The Constitution and progressive legislation enacted to replace old apartheid laws are upheld by the Courts, which are now to a significant extent more representative of the community than they were under apartheid. We are a rule of law state in which government is held strictly to account for its action or inaction,[17]and the common law is being developed to reflect constitutional values.[18] In this process the Constitutional Court has emphasised that at the heart of our new constitutional order:

> is the recognition that under our Constitution all human beings regardless of their position in society, must be accorded equal dignity.[19]

That is fundamentally different from the legal order that prevailed under apartheid. But it is only part of the story. The past still hangs over us, profoundly affecting the environment in which we are living. Looking at our country today, can we say that there is freedom from want? That there is equality of opportunity for youth and for others, jobs for those who can work, security for those who need it, and the ending of special privilege for the few? The sad

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[16] Section 7(2) of the Constitution.

[17] For example, *Pharmaceutical Manufacturers Association of South Africa* n. 8 above (holding that the exercise of all public power is subject to constitutional control).

[18] *Carmichele v Minister of Safety and Security* 2001 (4) SA 938 (CC)

[19] Hoffmann v SA Airways 2001 (1) SA 1, at para 27.

truth is that we continue to be one of the most unequal societies in the world, with great disparities between rich and poor. Despite the provisions of our Constitution there are still millions of landless people without access to adequate housing, health facilities, clean water or electricity, who have not had the benefit of a good education and are either unemployed or have limited employment opportunities. And children are growing up in these conditions.

Can we really say, as our Constitution requires, that ours is a society in which there is equal dignity, when so many people live in degrading conditions without access to basic needs, and without immediate prospects of securing a better life? We need to acknowledge that we have a long way to go to achieve social justice, to improve the quality of life of all citizens, and to free the potential of each person. These are not only moral concerns; the widespread poverty, and the disparities in wealth and privilege which continue to exist, are fault lines in our society. They must be addressed by the government in the interests of all of us, lest ours be another failed revolution.

What is presently of particular importance for this endeavour is education, to address the skills deficit, public health, to address illnesses such as HIV and Aids and the basic health of people living in poverty, and other needs of poor communities such as access to land and housing for communities migrating to urban areas in search of employment, job opportunities for those seeking work, and public safety and law enforcement which affect everyone. These issues are increasingly gaining greater attention and becoming the focus of pressure upon the government to take effective action to address them.

This is not only a concern of government; it is a concern of everyone. If we do not become a more caring society than we presently are, and do not press our government to address the widespread poverty and deplorable conditions in which so many of our fellow citizens are compelled to live, we will have only ourselves to blame for the consequences that will be the inevitable result. In doing so we must be conscious of two dangers which have to be confronted. Corruption, and the fragility of rights.

In the Scorpions judgment the Constitutional Court has recently reminded us of the danger of corruption.[20] It said:

> There can be no gainsaying that corruption threatens to fell at the knees virtually everything we hold dear and precious in our hard-won constitutional order. It blatantly undermines the democratic ethos, the institutions of democracy, the rule of law and the foundational values of our nascent constitutional project. It fuels maladministration and public fraudulence and imperils the capacity of the state to fulfil its obligations to respect, protect, promote and fulfil all the rights enshrined in the Bill of Rights. When corruption and organised crime flourish, sustainable development and economic growth are stunted. And in turn, the stability and security of society is put at risk.[21]

The judgment goes on to recall the words of Kofi Anan, former secretary-General of the United Nations, at the time of the adoption of the United Nations Convention Against Corruption:

> This evil phenomenon is found in all countries big and small, rich and poor but it is in the developing world that its effects are most destructive. Corruption hurts the poor disproportionately by diverting funds intended for development, undermining a government's ability to provide basic services, feeding inequality and injustice, and discouraging foreign investment and aid. Corruption is a key element in economic underperformance, and a major obstacle to poverty alleviation and development.[22]

Developing countries, such as ours is, where there is competition for scarce resources, are particularly vulnerable to the threat of corruption. Corruption does not exist in a vacuum. It depends on the complicity of those involved in the corrupt acts or practices, and an environment in which this is tolerated. It flourishes in closed and authoritarian so-

[20] Hugh Glenister v The Republic of South Africa [2011] ZAC 6.
[21] Id Para 166.
[22] Id para 167.

cieties, and it is constrained in open and democratic societies, where the law is respected, and there is a culture which promotes fairness and integrity.

Our Constitution proclaims the values of "an open and democratic society".[23] It entrenches the rule of law and respect for human rights. All law, including the common law, must be developed and legislation must be interpreted to promote the spirit of the Bill of Rights,[24] the core values of which are declared to be human dignity, equality and freedom. As the Constitutional Court has said

> No-one could miss the significance of the hermeneutic standard set. The values urged upon the Court are not those that have informed our past. Our history is one of repression not freedom, oligarchy not democracy, apartheid and prejudice not equality, clandestine not open government.[25]

These values are precious assets that we must do all we can to protect.

The rule of law and respect for human rights are indispensable building blocks for a democratic society. They are interconnected. The rule of law, properly understood, is not simply the application of the law whatever it may be, just or unjust. Properly understood, and this is the sense in which it is understood by our Constitution, it includes respect for fundamental rights, and an independent judiciary empowered to ensure that this happens. One of the virtues of the rule of law, and the civil and political rights that are found in our constitution alongside the socio-economic rights, is that they provide the infrastructure for an open society, in which the needs of communities can be articulated and political contestation can take place. They offer protection against the abuse of power and

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[23] Section 39(1): "When interpreting the Bill of Rights , a court, tribunal or forum – (a) must promote the values that underlie an open and democratic society based on human dignity, equality and freedom".
[24] Section 38(2) of the Constitution.
[25] O'Regan J in S v Makwanyane 1955(3) SA 391(CC)at para 322.

corruption, and provide tools for the communities themselves to take action to assert the rights given to them by the Constitution.

In the judgment on corruption to which I have referred the Constitutional Court held that the Constitution requires the state to establish an independent anti-corruption unit to investigate allegations of corruption. When established, this will be an important institution to combat corruption. There are other deterrents in the Constitution to corruption. In particular, freedom of expression, which includes freedom of the press and other media,[26] provides space for investigative journalism, and the making public of corrupt dealings, as do political rights and parliamentary privilege. They are buttressed by other rights, concerned with access to information,[27] just administrative action,[28] access to courts,[29] an independent judiciary,[30] and state institutions supporting constitutional democracy — which include the Public Protector, the South Africa Human Rights Commission and the Auditor General.[31] These rights and institutions are interconnected, reinforce each other, and together are stronger than any one of them alone.

But rights are fragile. John Milton, who like John Warr, also wrote at the time of the English revolution, warned of this. He asked how a nation having won its liberty:

> should be so heartless, and unwise …as not to know how to use it, value it, what to do with it, or with themselves [than] …to run their necks again into the yoke which they have broken, and prostrate all the fruits of their victory for naught. [32]

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[26] Section 16 of the Constitution.
[27] Section 32 of the Constitution.
[28] Section 33 of the Constitution.
[29] Section 34 of the Constitution.
[30] Section 165 of the Constitution.
[31] Chapter 9 of the Constitution.
[32] John Milton, "A ready & easy way to establish a free Commonwealth", in *Milton's prose writngs* (London: Everyman's Library, 1958): 227.

No one can say that has happened in South Africa. We are as I have already said, a far better country than we were at the time of apartheid; a rule of law state, in which the Constitution is supreme, and rights are entrenched and enforced by the Courts. Whilst it is correct that no one can say that we are about to run our necks into the yoke that has been broken, and prostrate all the fruits of the victory for naught, no one can say that this cannot happen. It can happen anywhere, in any country, anywhere in the world. It happened in the past in Germany under Hitler, in Russia under Stalin, and in many other countries in the course of history. It is happening now in many countries in different parts of the world, including countries where the people had earlier rebelled against oppression and claimed the freedom to which their citizens were entitled.

Rights are fragile. They are easily respected by governments while the going is good, but they become vulnerable when society is under stress. That is the lesson of history. Governments are not the natural protectors of rights. When they have to take difficult decisions that may be unpopular and give rise to dissent, there is a temptation to respond by curtailing some of the rights that were demanded by the people and embraced by them when they were freed from oppression. We need to resist this temptation and to be conscious of the consequences of giving in to it. The first incursions into rights are the most dangerous, for they open the way for other incursions, until bit by bit rights are lost. Looking back we can see that this is how the security state was established under apartheid. It is the responsibility of all of us to ensure that this does not happen again. The loud public debate at the time draft anti-terrorism legislation was submitted to parliament, and then withdrawn, and the protests against the disbanding of the Scorpions, and the draft legislation making provision for the classification of information, shows that there is a public will to protect rights. It is important that this should transcend political allegiances and become part of the culture of our society. The existence of such a culture is the greatest protection against the erosion of rights.

Stuart Saunders is not an "obsequious and servile spirit". He is a defender of freedom; an enemy of corruption, and an advocate for the promotion of socio-economic rights. It is right that this should be acknowledged in the publication to honour him, and that we should thank him for what he has done and continues to do in the interest of our country, and all of us who live in it.

ARTHUR CHASKALSON joined the Johannesburg Bar in 1956, took silk in 1971, and from 1979 to 1994 was the Director of the Legal Resources Centre, which challenged the implementation of apartheid practices, and provided legal advice and assistance to vulnerable and marginalised communities. In June 1994 he was appointed as the first President of South Africa's new Constitutional Court and was the Chief Justice of South Africa from November 2001until his retirement in 2005. He has received numerous awards for his work in promoting human rights, is the recipient of nine honorary doctorates and the award of Supreme Counsellor of the Baobab [gold], a national honour, for his service to the nation in respect of constitutionalism, human rights and democracy. On his retirement in 2005 he was described by the then President Mbeki as a "giant among the architects of our democracy".

LEADING UNIVERSITIES: BUILDING A TEAM

By William G. Bowen

Colleges and universities come in every size and shape and operate in every kind of society imaginable. Generalising about these fascinating (endlessly complicated) institutions is hazardous to one's health, but I have come to believe that there are certain propositions that do apply in many contexts, across countries and institutional types. In this short essay, I will concentrate on lessons that I have learned from many years working to build teams of administrative colleagues and faculties in the United States of America.[1]

BUILDING AN EFFECTIVE ADMINISTRATIVE TEAM

I am skeptical that it was ever possible in modern times for a university vice-chancellor or president to accomplish much on his (or her) own. Certainly it isn't today. There is just too much to do, too many constituencies to keep in mind, and too many personal relationships that have to be handled sensitively. One of the things I am reasonably good at is identifying and recruiting outstanding people, and whatever success I enjoyed in the president's office at Princeton was attributable in large part to the quality of my colleagues and to the highly collegial working relationships that we enjoyed. A sure path to mediocrity, if not failure, is to be afraid of good people. I have always believed in surrounding myself with colleagues who can do all the things that I cannot.

The relationship between the president and the provost (the general deputy to the president in most academic settings) is especially critical.

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[1] This essay draws heavily on my recent book, *Lessons learned: Reflections of a University President* (Princeton University Press, 2010). The book also discusses "lessons learned" in dealing with trustees, working to maintain institutional independence and freedom of expression, setting academic priorities, recruiting a diverse student population, raising money and working with alumni, balancing pressures inside a president's office, and deciding when and how to leave.

At Princeton I was fortunate to work with a series of outstanding provosts who went on to lead other institutions. My last provost, Neil Rudenstine, later served as president of Harvard. Neil and I worked together for over twenty years, and I learned so much from this distinguished scholar of English literature who had impeccable judgment and could see around corners that I didn't even know existed. The joke at Princeton was that the university had two provosts and two presidents, since we largely functioned interchangeably. We almost never went to the same meeting, since we got more done by dividing the work. It should also be said that while we had grown up differently, were from different disciplines, brought different perspectives to bear on issues, and had different tendencies (mine, to get it done now — Neil's, to get it done right!), we had exactly the same sense of the university's mission. We never wasted time debating what needed to be accomplished. The value of having shared values and shared commitments cannot be overstated.

I also learned how valuable it was to have a "non-academic provost" — a person who could do whatever needed to be done on the administrative side of the house. The skills my long-time Vice President for Administrative Affairs brought to the table are often undervalued. He was the consummate listener, a kind of ombudsman without the title. He was also willing to take on the unglamorous tasks that had to be done well but that most people preferred to avoid (oversight of security, food services, and so on). He was an all-purpose warrior who had, as he liked to say, "carried his spear" for a long time. In my view, every president needs at least one such experienced spear-carrier whom everyone trusts.

Having outstanding deans, investment officers, and administrative assistants matters tremendously. I also learned — through first-hand experience — that institutions should not undervalue contributions made by the truly unusual person who can work across constituencies. My example is Fred Fox, '39 (who always insisted that no Princeton name was complete without class numerals). Fred's title was "Keeper of Princetoniana", his office was directly across from mine in Nassau Hall, and his presence brightened every day. An irrepressible spirit who somehow managed to make the most surly person smile, Fred was a

great ambassador to every constituency. He was once prevailed upon to complete — of all things antithetical to his character — a "position description and analysis form". A colleague observed: "The position and the incumbent defy classification, and that is as it should be". Fred's submission was described as "an awesome illustration of the difference that one dedicated individual can make to the life of an institution". Fred listed 161 separate functions involving students, faculty, alumni, and friends. Included on his list was "Soothed Yale Professor whose bulldog was stolen by our undergraduates. Petted his dog".

In recruiting senior colleagues, one major lesson I learned, in the aftermath of a serious mistake, was not to over-persuade. In one case, I believed that I had found the ideal person to fill an important position, and I courted this individual assiduously. As we were about to conclude what I thought were highly promising negotiations, the individual called me and said that, after much thought, he had concluded that the job just wasn't right for him. I refused to accept this conclusion and unleashed all the persuasive skills that I could muster, explaining why the individual was in fact just right for the job and why he would love it. The candidate accepted the position. Within a year and a half it was evident that his judgment about lack of fit had been correct all along, and that I had been wrong. There was an amicable parting of the ways. The lesson is obvious: individuals being recruited often know more about themselves and what they can and cannot do (and will enjoy doing) than anyone else will ever know, and it is wise to listen carefully to self-assessments. Subsequently, I lived by the adage: "no reluctant dragons". I felt so strongly about this lesson that I even had t-shirts made up with "no reluctant dragons" emblazoned on the back.

Another (closely related) lesson about choosing people that I learned only imperfectly over time is to listen carefully to the testimony of a wide variety of people who have worked closely with a candidate. It is dangerous to decide too quickly that someone is exactly right for a position — and then fail to heed clear warning signals provided by others. Sometimes I just didn't really "hear" comments that I didn't want to hear because they contradicted what I thought I already knew.

It can be especially valuable to take testimony from people who have worked for a candidate in a subordinate role. Some people are good at relating "up" but not so good at relating "down".

I also learned not to focus too much on fixing my last mistake. When seeking to replace someone who had displayed an obvious deficiency, it is tempting to concentrate on finding a successor without that particular deficiency. But that approach can lead to appointing someone who lacks other needed skills. I learned this lesson in domains as different as football (coaches need to be able both to inspire and to call the right plays inside the 20-yard line) and librarians (who need to be able both to take advantage of new technologies and manage staff in an old-fashioned, loving way). There is no escaping the need to look at the whole set of talents required and then to make a determined effort to find someone who has them all. Those of us who grew up as teachers sometimes mistakenly think (as I have done) that we can teach more than we can. One colleague wisely admonished me: "People come in packages; you either buy the package or you don't, but do not believe that you can improve the package very much".

With the best will in the world, it is unrealistic to expect to make the right appointment every time. Inevitably it will turn out that, as an experienced friend once put it, "all of our ducks are not swans". People who are excellent in one setting ("swans" in one pond) may be less effective when asked to do something else (may become "ducks" in another pond). Some absolutely outstanding faculty members are not good at certain kinds of administrative tasks. For example, one of my closest friends at Princeton, a highly regarded academic with an international reputation, was neither happy nor terribly successful during a brief stint as provost. He found relations with the student press particularly vexing, and I will never forget his response to a reporter for the *Daily Princetonian* who was convinced that one mistake had occurred because the provost was managing a vast conspiracy of some kind. Exasperated, he said: "Can't you accept the simple explanation of incompetence?"

When I was asked what lessons I had learned in the course of appointing countless numbers of people, I said: "I have learned two

things: to acknowledge my mistakes sooner and to fix problems faster". Once it is evident that someone is just not working out, it rarely, if ever, pays to just hope that things will improve, that the sun will shine tomorrow. A trustee commentator with extensive business experience told me that in the venture capital world in which he lives, there is this saying: "I never fired anyone too soon". A related lesson I learned is that it is sometimes (though certainly not always) easier than one might have supposed to deal with unwelcome personnel problems. The person having difficulties may well recognise that there is a problem and even be relieved when the problem is identified and addressed directly. In such situations, I learned to say: "Let's not waste time debating what went wrong or how we got where we are — no finger-pointing. Rather, let's simply agree that, for whatever reasons, things are just not working and that we need, together, to find a graceful way out".

Recruiting and retaining faculty

Building the faculty is a never-ending task, and a task that is vitally important. Over the long run, the quality of a university depends critically on what one hopes will be the ever-growing capacities of the faculty — the teaching and research abilities of individual faculty members, to be sure, but also their collegiality and commitment to the university at large.

The first lesson I learned about building the faculty is the importance of identifying outstanding individuals to chair departments and then persuading them to serve in these demanding positions. In many colleges and universities, departmental chairs operate in a critical space between full-time administrators and the faculty. They are, in a non-trivial sense, both administrators and faculty members. Their leadership can make a tremendous difference. In my experience, strong chairs of departments are essential in recruiting and retaining the ablest faculty members, and in resisting tendencies to slide back to mediocrity. It is important to avoid the temptation simply to name a truly outstanding scholar, on the often-unconscious assumption that the superb scholar will necessarily be a great judge of candidates for appointment. As one

wise person put it in recalling the failure of a truly scholarly chair to arrest the decline of a department, "Alas, the great man had a preference for likeable mediocrities".

In my view, the chair of a department needs to feel that he or she works for the president or vice-chancellor and not just for the members of the department — as essential as it is for the chair to enjoy the strong support of departmental colleagues. For this reason, I always appointed the chairs of departments myself, after having received the best counsel I could obtain from members of the department and key members of the administration. My practice was to write to all the faculty members in the department and ask them to send me a confidential memo explaining the main issues before the department and who they thought would provide the best leadership in addressing these issues. They were also encouraged to be brutally candid in telling me who they thought should *not* be appointed. I found these communications to be enormously helpful in making good appointments — and in avoiding mistakes. The memos were also invaluable guides to broader issues I needed to know about. This was a time-consuming process, but it was well worth the investment.

A question to which there is no easy answer is how long someone should chair a department. Practice varies and probably should vary. It is clearly unwise to have a "permanent" chair, but a strict limitation on years of service also seems unwise since circumstances sometimes dictate a need for considerable continuity. Some flexibility is required. But whatever the expectations concerning length of service, I am convinced that mechanically rotating faculty through the position of departmental chair is at least as ill-advised as having chairs elected by their colleagues. Not everyone, and certainly not every great scholar and teacher, is suited for the job of chair. An ineffective departmental leader can make it hard to accomplish positive things and can all too easily become an impediment to constructive change.

Everyone involved in the process of faculty recruiting needs to maintain a consistently high standard. The dangers of special pleading by departmental faculty on behalf of "friends" (sometimes former graduate students) are all too real, and both department chairs and

deans/provosts must be alert to this danger. It is essential to recognise that many departments, and especially specialised sections within departments, are tiny. All of Roman history, for example, may be in the hands of one or two people — and a single bad appointment can have highly detrimental effects. Even larger departments can decline rapidly if even a few mediocre appointments are made. And it can take decades, not just a few years, to recover from such mistakes. This is the reason why a rigorous process of reviewing departmental recommendations is so important.

Departments must of course take the lead in screening potential candidates for appointment, but once top candidates have been identified, the president can sometimes play a valuable role in the recruitment process. My experience in building molecular biology at Princeton illustrates this point. In that situation, the need for a high level commitment of resources meant that the individuals being recruited had to be confident that the president and provost were solidly on board. Even when no special commitment of resources is required, a personal touch can be important. I remember a case in which an engineering department was trying to persuade a much sought after scientist to come to Princeton — and this individual happened to care greatly about his squash game. At that time (no longer, I am sorry to say), I was a good squash player and the chair of the department asked if I would be willing to play with his candidate in the course of a campus visit. I agreed and then asked: "Am I supposed to win or to lose?" The answer was, "win!" Fortunately, I did — and then explained to the prospective faculty member that I had many squash partners who were better players than I was, and that if he came to Princeton he could no doubt improve his game. He came — whether for that reason or not, I will never know.

Departments that are especially strong academically and especially proud of their academic standing sometimes argue that it is only the scholarly/research capacities of a candidate that matter. Academic accomplishment and academic promise are clearly of first importance, but I disagree with the proposition that no other factors should be considered. Princeton's experience in building the life sciences is again relevant. That history demonstrates clearly that leadership and

collegiality are highly consequential. A visit to my office by a talented young assistant professor who had decided to leave the university made a lasting impression on me. He said that his working environment was so unpleasant, and personal relationships were so strained, that he just couldn't continue. "Good science", he said, "is not enough". Of course, universities need to welcome — and urge on — the opinionated scholar of outstanding ability who is never going to win a collegiality award.[2] I worked, more or less cheerfully, with many people of this kind. But everyone cannot be like this. There has to be a core of people who will look out for each other and for the institution writ large.

In particular, it is essential that there be faculty members with the capacity to lead their departments, and such capacities are certainly not defined solely by having impeccable scholarly credentials.[3] The unending need to find faculty who can provide leadership, and who can be good administrators as well as fine teachers and scholars, results in part from the fact that very bright people interested in academic careers are often uninterested in such roles — and unsuited for them. This systemic pattern explains why it is critically important to seize any opportunities that present themselves to recruit talented people who can "do it all".

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[2] One faculty friend of mine had such upsetting conversations with another faculty member that he had a card printed up that read: "On the advice of my doctor, I can discuss this subject with you no longer". He presented this card when his annoying colleague tried to extend a conversation.

[3] At one point I was looking for a new chair of a troubled department and was having no success identifying a suitable candidate. Finally, I was driven to offer the position to someone who lacked many of the qualities that a chair ought to have. I was desperate. The person in question recognised his own limitations and said to be me, in the most engaging way: "Well, I will agree to do it, but both of us have to recognise that putting me in this position will be the ultimate test of 'role theory'" (the notion that people adjust their behavior to the roles that they are asked to perform). The sad conclusion to this story is that, in spite of best intentions, the individual did a truly terrible job as chair — role theory failed us.

There is another side to this coin. There are people (fortunately not many) who are so dysfunctional in any group context that smaller colleges and universities, in particular, need to be careful in appointing them. Needless to say, I am *not* talking about applying any kind of social/political litmus test; nor am I arguing against the inclusion of intellectually provocative colleagues. Rather I am talking about being aware that some individuals, because of who they are and how they relate to others, create what economists call "negative externalities" — they make everyone around them worse, rather than better. It is especially difficult for small places to try and cope with carriers of this negative externality gene. Larger universities generally find it easier to live with truly erratic and sometimes destructive behavior, but extreme cases can prove problematic even in the most sophisticated and "forgiving" contexts.

One bad appointment that I initiated was an individual who, while very bright, was so annoying to almost everyone that he succeeded in doing what no one else had been able to do: unite a disparate group of people, who now had a common enemy! This problem resolved itself because the faculty member in question kept making outrageous demands on his colleagues as well as on the university — demands which had to be, and were, rejected. In time, these "rejections" led the troublesome individual to accept an appointment elsewhere, an outcome that led to a rousing cheer from those left behind. In retrospect, I never should have recommended the appointment of this person in the first place; there were plenty of warning signs.

Dealing with the odd case can be time-consuming and draining, but it is a less fundamental challenge to building a strong faculty than putting in place a salary structure and a process for adjusting salaries that serve the institution well. Setting salaries is extremely important because of the obvious role compensation plays in driving decisions individuals make as to where they will work. Compensation policies and practices also have strong "signaling" effects. Too much salary differentiation within the faculty (which inevitably becomes known, even if the salaries of individuals are treated as confidential) can lead to jealousies and feelings of unfair treatment that interfere with potentially valuable collegial relations. Still, there are markets out there, and it is foolish in

the extreme to believe that one can ignore such realities. Economists and engineers, doctors, lawyers, and professors of business, are going to command higher salaries than faculty in most humanities fields. Refusal to recognise such differences (as British universities tried to do at one point) leads to problems of many kinds, including difficulties in attracting top people in the most competitive fields and pressures to substitute early promotions for salary adjustments.[4]

Within disciplines, too, it is necessary to recognise differences in achievement and in contributions. Incentives matter, and it is important to be able to recognise and reward truly outstanding performance. For these reasons, I have always been a strong believer in a "merit "system of compensation — albeit within a salary structure that is generally understood and accepted. Needless to say, the effectiveness and credibility of a merit system depend heavily on having very good information about the performance of individual faculty members — as teachers, scholars, and contributors to the institution. Also important, I believe, is the direct involvement of faculty, both as chairs of departments recommending salary adjustments and as members of the central review committee.

The ability to make clear distinctions among faculty in setting salaries can also be a valuable tool in correcting the occasional mistake made in having given tenure to a person who has not lived up to earlier promise. I have seen a number of situations in which communicating clearly to a faculty member that he/she should not expect more than minimal salary adjustments going forward led to decisions to relocate. It was sometimes possible to say simply (and respectfully) that what the person did, and liked to do, might be valued more highly at another institution. It is fairer to let someone know where he or she stands than to have ambiguity and vagueness color relationships. There is much to be said for directness and candor.

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[4] William G. Bowen, "University salaries: Faculty differentials", *Economica*, new series, 30, 120 (1963): 341-359.

Let me next recount an experience I had with a faculty member who had just won a Nobel Prize in physics. This well-deserved recognition came at a time when another leading university was spending lots of money recruiting top faculty, and my physicist (whom I think I can safely identify by name — Val Fitch) was told that the university seeking to recruit him would double his salary. Professor Fitch came to see me and was kind enough to begin the conversation by saying: "Don't worry, I'm not going". (We were personal friends and that may well have encouraged him to reduce my anxiety level). But that was not the end of the conversation. Val went on to say that his research group did have real needs, and that he hoped Princeton would address them. He said (and I remember his exact words): "Excellence can't be bought, but it has to be paid for". In short, he was not going to be bribed to leave, but we had to meet his legitimate needs. I responded by saying, "Val, that's just right". "We will do our best to help you and your colleagues continue to be leaders in your field, but if the time comes when we can't do that, you should leave". Professor Fitch continued to be a valuable member of the Princeton faculty until his retirement. Being willing and able to "pay for excellence" is a good way of stating the obligation of a university to someone of Fitch's caliber.

Important as it is to have in place an effective process for generating good recommendations regarding faculty appointments, it is equally important to have a strong process for reviewing tenure recommendations. Two principles are worth highlighting:

- First, recommendations for new appointments or promotions to tenure have to be judged in the context of departmental/university needs, not just in terms of the "absolute" merits of the candidate. If a department already has a relatively young tenured member in 20th century Chinese history, for example, it may not make sense to award tenure to someone else of roughly the same age who has the same interests. Complaints about unfairness ("look at how good the candidate is") cannot override the need to allocate resources responsibly.

~ An even more important principle is the desirability of resolving doubts or uncertainties against the candidate, hard-hearted as this may seem. A wise Dean used to say, "doubts increase". By this he meant that if there is any uncertainty about a candidate's quality or prospects, the odds are high that such "doubts" will grow over time. That is a lesson I learned over and over again: "doubts increase". Difficult as it is to deny a promotion to someone whom colleagues like and think will get better over time, it is wiser, as a general rule, to just say "no" if there are reservations. A related proposition is that if a department already contains several mediocre faculty members, it is almost always a mistake to add someone else who is not really excellent — even if the individual is better than most current members of the department.[5]

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[5] I remember one extreme case in which the Committee turned down a recommendation from a not-very-strong department even though the department insisted that the candidate was better than anyone now in it. "Perhaps", was the response, "but not good enough".

THE HERSCHEL CONDITION

By Brian Warner

There is an advanced concept in the design of imaging optics, used to ensure aberration-free images after passage through a series of optical elements, published in 1821 in the *Philosophical Transactions* by John Herschel and known as The Herschel Condition.[1] The present article has nothing to do with that. Instead, the expression suggested to me that it might be a good occasion to praise a great human being, and interesting to trawl through the extensive Herschel publications and correspondence for personal comments to discover Herschel as a person, rather than as a dry Victorian scientist, albeit one of the leading researchers and philosophers of the nineteenth century. The correspondence is huge, preserved in libraries and archives around the world but made accessible through a project that paralleled a similar effort made for the Charles Darwin letters. The Herschel Calendar lists and summarizes 14 815 letters.[2]

John Frederick William Herschel and his family arrived at the Cape of Good Hope in January 1834, John to complete the survey of the sky which his famous father William Herschel (discoverer of the planet Uranus and of infrared radiation) had begun in the 1780s. A great deal has been written about John Herschel, as polymath, scientist, philosopher and artist, but here, unusually, we are interested in him as a human being, and as a scientific instrument in his own right — what can be deduced about his personal sensitivities to physical stimulations such as light, sound and smell?

First, of Herschel's optical proficiency there is no doubt — made evident through the published results of the years that he spent at the telescope. The most telling relative assessment is the comment by the historian Agnes Clerke: "[his telescopes] certainly afforded him better

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1 J. W. C. Gates and J. Maxwell, *John Herschel 1792 – 1871: A bicentennial commemoration* (London: The Royal Society, 1992): 101.

2 John Hershel, *A calendar of the correspondence of Sir John Herschel*, M. J. Crowe, D. R. Dyck & J. R. Kevin, eds. (Cambridge: Cambridge University Press, 1998).

views of the nebulae than had been obtained by his father",[3] which has been attributed[4] both to more skillfully polished telescope mirrors and to better eyesight (perhaps merely that of a younger man — father William was nearly fifty years old when he started his survey) and resulted in John finding 525 faint northern nebulae and clusters that were overlooked by his father. John himself, out of filial respect, avoided making this comparison. The final product of Herschel's complete survey of the sky (the only one conducted before the introduction of celestial photography at the end of the nineteenth century), of which the southern portion was published in 1847,[5] is a monument to his ocular abilities and stoic labours.

But the eye does not exist as a mere detector — the eye-brain combination is crucial and is revealed most clearly in its artistic applications. Again we have a succinct statement concerning John Herschel — his aunt Caroline (William's sister) wrote "I heard Hauptman Müller wishing to have but one of John's Talents, viz. that of drawing";[6] Georg Müller was an artist and engraver in Germany and produced many of the best known admirable portraits of members of the Herschel family. But the proof lies in the end product: Herschel made over 750 drawings in his life, all but a few using the *camera lucida*, an optical device invented by William Wollaston (a friend of William Herschel) which enables accurate outlines and perspective to be achieved but leaves the finished quality entirely in the skill of the artist.[7] Several books have been published containing Herschel's drawings.[8,9,10] Here we draw attention to the amazing eye-brain-hand

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[3] Agnes Mary Clerke, in Agnes Mary Clerke, Alfred Fowler & J. E. Gore, *The Concise Knowledge Astronomy* , 2nd ed. (London: Hutchinson & Co., 1912): 23.

[4] Brian Warner, "John Herschel at the Cape of Good Hope", *Transactions of the Royal Society of South Africa*, 49 (1994): 19.

[5] John Frederick William Herschel, *Results of astronomical observations made during the years 1834, 5, 6, 7, 8 at the Cape of Good Hope* (London: Smith, Elder & Co., 1847).

[6] C. Herschel, Biographical note on John Herschel, 27 May 1838, in *Herschel Papers* (University of Texas, Austin: Harry Ransome Humanities Research Center): M1084.

[7] David Hockney, *Secret knowledge* (London: Penguin Putnam, 2006).

[8] L. J. Schaaf, *Tracings of light* (San Fransisco: The Friends of Photography, 1989).

coordination of John Herschel: an example is given in Figure 1, which is a detail from his sketch made on 29 September 1827 of the suspension bridge over the Menai Straits. Note the perfect convergence and divergence of the steel suspension hawsers. In none of Herschel's drawings is there any sign of any erasure or ammendment — he was able to put onto paper exactly what he had in mind, and with considerable rapidity. One of his skills was an ability to indicate the texture of foliage so well that it is often possible immediately to identify the species of tree. A similar artistic coordination is seen in the finest surviving Stradivarius violin — *Le Messie*, in the Ashmolean — where the double purfling ornamentation inset around the outside of the belly was cut freehand and is machine perfect. Whenever I am in Oxford I pay homage to *Le Messie*.

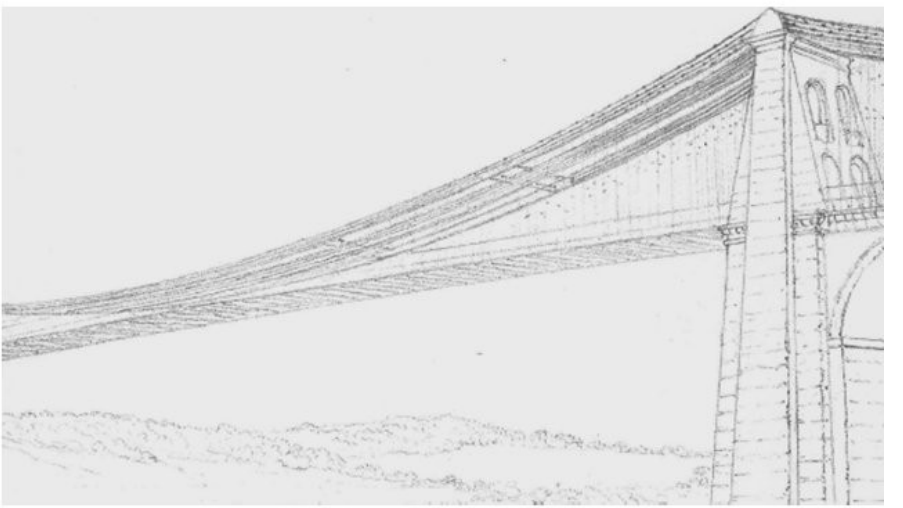

Figure 1. Detail from Herschel's drawing of the bridge over the Menai Straits. Original dimension 110 x 50 mm.[11]

[9] Brian Warner & J. Rourke, *Flora Herscheliana* (Johannesburg: Brenthurst Press, 1996).
[10] Brian Warner, *Cape landscapes* (Cape Town: University of Cape Town Press, 2006).
[11] Schaaf, *Tracings of light*.

The Herschels' response to the natural floral beauty when they arrived at the Cape was simply to be dazzled. John and his wife Margaret relaxed during their four years in Wyberg by generating over one hundred exquisite water colours, John outlining in superlative detail in pencil, and Margaret brushing in the colour. I don't know of another example of such successful conjugal artistry. The paintings have been published by the Brenthurst Press.[9]

Next, Herschel's hearing. Though far from genetically preordained, it is not surprising to find that John, the son of a composer/performer, was a good musician — (an extant descendant, John Herschel-Shorland, plays John's baroque-pitch flute and his cousin Anthony Herschel Hill is a composer). Aunt Caroline, in the note praising his artistry (see *supra*) added that even before going to university "…he was a good poet …a good Pianoforte player; afterwards an excellent flute". The emphasis that an enamoured John placed in a letter to his mother on his intentions to marry Margaret is also significant: "One of her talents (for she has talents of the first order) will win your heart through your ear — She is a most divine musician — Oh! You should hear her play Mozart's music — and her singing is the sweetest, most touching, gentle, unpretending thing you ever heard".[12] He evidently possessed absolute pitch — in his diary for March 1836 (and again in November 1837) under *Occasional memoranda*, he reports of a nightjar's song "The Goat Sucker (March 30th & 31st) very loud and frequent in the woods at night" and draws a staff on which he accurately notates the song (Figure 2.).

For his acuity of hearing we have the statement by his wife that, from the top of Table Mountain, overlooking Cape Town, "Herschel said he could hear the church clock sound from below", which was not attested by any of the rest of the party.[13]

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12 Letter from John Herschel to Lady Mary Herschel, 15th December 1828 in *Herschel Papers* (University of Texas, Austin: Harry Ransome Humanities Research Center): UT L0516.

13 Brian Warner, *Lady Herschel, Letters from the Cape 1834 – 1838* (Friends of the South African Library, 1991): 138.

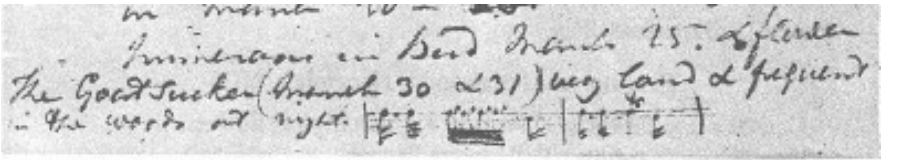

Figure 2. Detail from Herschel's diary for March 1836.[14]

Next, Herschel's olfactory organ. Unlike Galileo's finger, which was taken *post mortum* from the funeral cortège and is still on display in Florence,[15] John Herschel's nose remained attached to its owner, buried next to the tomb of Isaac Newton in Westminster Abbey. And we have unusual evidence that it was a very retentive nose, judging from a letter by Herschel to Irishman William Henry Harvey, undated but written in response to an enquiry from Harvey about the scents of Cape flowers;[16] the latter himself replied on the 6th of November 1837 which dates the sequence. [17] Harvey became Colonial Treasurer at the Cape of Good Hope almost inadvertently — he thought he had been offered the post but through a clerical error it was his brother Joseph who had been appointed. They both sailed to the Cape, arriving in September 1835, but Joseph's health declined and they returned to England in April 1836, Joseph dying on the voyage. William then was (re)appointed to replace him and sailed back to the Cape. But Harvey was rather more than a competent finance manager — already he had a reputation as a botanist of distinction, soon to publish the earliest South African Flora[18] and, post-Cape, became one of the leading Victorian botanical experts. At the Cape Herschel and Harvey became close friends, Herschel submitting to the latter the results of his bulb-collecting expeditions for identification; when Herschel sailed back to England in April 1838 he took with him a collection of some hundreds of bulbs packed in dry sand, most of which he managed to grow on — incidentally causing him to be recognised as an authority on Cape

[14] David Stanley Evans, Terence J. Deeming, Betty Hall Evans and Stephen Goldfarb, eds., *Herschel at the Cape* (Balkema, Cape Town, 1969).
[15] Peter Atkins, *Galileo's finger* (Oxford University Press, 2003).
[16] Wellcome Trust, Wellcome Institute of Medical History Library, London, WT 65667.
[17] Royal Society of London, Herschel Papers, HS 9.244.
[18] William Henry Harvey, *Genera of South African plants* (Cape Town: Robertson, 1838).

bulbs, consulted by the Hookers, successive Directors of Kew Gardens.

Harvey's original letter of enquiry about scents has not survived, but his the 6th of November comment enumerates one reason why he asked: "Unfortunately my nose is a very undiscriminating one — I can therefore say little on the smells of our wild flowers, which unless they be very strong indeed, I cannot perceive". Herschel's nose, on the contrary, was a sensitive detector — used as an analytical instrument:

> …but the subject of vegetable odours is perhaps as curious a one as any. I distinguish among the Cape scents several quite separable although often coexisting in the same flower and cannot but believe that these depend on certain definite chemical compounds which these plants in common with others secrete in more or less quantity.
>
> First on the list stands the odour of the Tonquin bean which I believe to exist in some kinds of hay — in the intense scented Morea of the Constantia flats (now spreading into this neighbourhood) and in the Gladiolus Viperatus — in the two latter to an extraordinary degree. The Tonquin bean has no pungency [?] does not cause sneezing or produce cough. In many [people] the odorous principle is evidently accompanied with a violent irritating one, that which produces the 'Hay asthma' which I have myself experienced on one occasion in the form of a cough lasting several days — of a very painful kind & hardly allowing any rest. Something similar to what arises on breathing chlorine.
>
> The same irritating principle exists in an inferior degree in the Gladiolus & somewhat more in the Morea. In the 'Sneeze-wood' it is uncombined with the odorous principle — if the same.
>
> Second the peculiar scent of the Orange flower. This occurs in perfection in the Hesperantha (? Pilosa) — the white Satyrium of the flats — less intense but equally grateful in a small-

> rooted, early flowering, yellow Anthericum or ? Bulbine — not to mention the yellow Jasmine or that white flower they call the Cape Jasmine in w^{c} it is mixed with another scent.
>
> Spicy flavours. Thirdly Cinnamon — in the early green Satyrium common under the shade of Shubberies — ? cucullatum? Pepper — most intense and ridiculously characteristic in the commonest of all the Satyriums just now out of flower. Why not call it Sat^{m} Piperitum? Ginger — In the Hesperantha (? Spathaeca) the richest of the Hesperantha scents — in which it occurs mixed with & almost over powered by that of honey. It is worth remark that this is almost the only flower I can call to mind (except perhaps the Sunflower and that only in certain states) which recalls the flavour of honey, though honey is a product of all flowers. I am reminded of a small white heathy plant hereabouts with a powerful honey scent. Does the odorous principle of honey than depend on a secretion from the bee and not the flower? Bees are all in bed when the Hesperanthus opens. The young leaves of the common …poplar in early spring often scent of honey and so does the fir tree of our avenues in very hot sunny and calm days — but it is not then flowering. The intensity of honey scent which is felt on the road to Kirstenbosch is due to an insect — an Aphis inhabiting the Caffer Chestnuts. Pimento — The Satyrium Herscheliae (the only specific name of which I feel certain).

We see here the all round enquiring scientist at work. But let us divert attention briefly but helpfully to still-life painting — which exploded in the 16th century concomitant with growth of interest in the natural world. Thousands of paintings were commissioned — ranging from the Florentine Medici court to those chosen by merchants who wished to be seen as successful.[19] Caravaggio in particular, at the beginning of the 17th century, pioneered painting of life-like baskets of fruit decorated by sprigs of vines and flowers, which have influenced artists

[19] L. Jardine, *Wordly goods*: *A new history of the Renaissance* (London: Macmillan, 1996).

ever since.[20] Throughout that century oil paintings of flower groups in vases flourished, particularly in Flanders and the Netherlands, usually with symbolic significance to the choice of the flowers. Although deliberately constructed to be as realistic as possible, these paintings were in fact idealised and often false in content, in that they depicted flowers that did not bloom all at the same time of year. Of course, the artists had only to look at their old sketch books to assemble a suitable Elysian[21] field for the purchaser.

What has all this to do with Herschel's description of flower scents? It arises through realising that in late summer, when the exchange between Herschel and Harvey took place, probably only one of the species listed by Herschel was in flower: he was assembling a group of scents from memory (there is nothing in his diaries or papers to suggest that he recorded olfactory impressions as they occurred). A few explanatory comments may be in order:

The tonquin (or tonka) bean (*Dipteryx odorata*), seed of a tree native to Brazil and Guiana, containing the aromatic coumarin, tasting of almonds or hay, used as a vanilla substitute in some countries, but banned in others because overdose causes heart and liver problems. Herschel's comment on a resemblance to breathing in chlorine is not unexpected — he was one of the leading experimental chemists of his day. Constantia Flats moreas; of the two common moreas at the time, *Morea papilionacea* is the most likely — it is sweet scented and blooms from August. The other flower, *Morea aristata*, now very rare, has almost no scent. Sneeze-wood, *Ptaeroxylon obliquum*, a member of the citrus family, was common in Herschel's time at the Cape; it can cause respiratory complications. *Hesperantha (?) pilosa*, which Herschel refers to as the white satyrium of the flats, and mentioms in his diary "the Great sweet scented Satyrium (white)" is probably *Satyrium candidum*,

[20] Edward Saunders, lecture series at University of Cape Town Summer School, 2011.

[21] The word *Elysium* is thought to be derived from the place where people struck by lightning (*enelysion)* live in peace surrounded by beautiful flowers.The author almost joined them recently – Zeus missed by about 4 metres, hitting instead an innocent lamp post of greater height, intellect and conductivity.

flowering September to January. Anthericum, or Bulbine — not definitely identified, but Herschel himself says that it is early flowering. Cape Jasmine is the well known strongly scented *Gardenia Jasminoides*. Commonest Satyrium — said by Herschel to be just out of flower: probably *Satyrium carneum*, which blooms from September. *Satyrium Herscheliae*, now known as *S. erectum* (the genus originally called *Herscheliae* by Harvey, intending to pay tribute to Margaret Herschel, was preempted by a different name assigned by the botanist John Lindley). Described as having a pungent scent by Hamman in a very interesting general article on the scents of South African orchids;[22] Herschel's 'pimento' is rather more creatively descriptive.

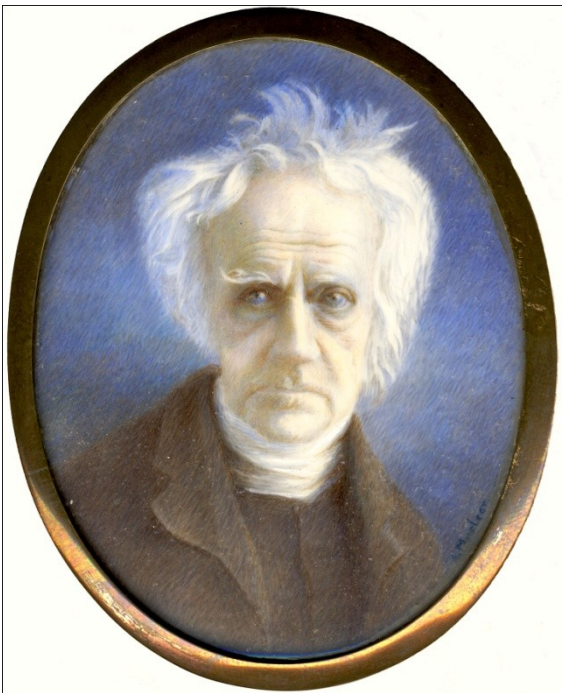

Figure 3. Watercolour of John Herschel after an 1867 photograph by Julia Margaret Cameron.[23]

[22] Linet Hamman, *Project Fragrance*, http://www.orchidssa.co.za/Project fragrance.htm. More generally see Steven A. Frowine, *Fragrant Orchids* (Portland OR: Timber Press, 2005).

[23]Artist unknown, but probably Augusta Emily Maclear, daughter of Herschel's colleague at the Royal Observatory, Cape of Good Hope. From

John Herschel was big hearted in both senses of the expression. Early in the voyage to Cape Town, writing to Herschel's cousin Mary Baldwin, Margaret asks "what dose would you propose Cousin Mary for a man with a pulse at 46".[24] Such a pulse rate is near the lower end of the range for highly active athletic males, which Herschel was not noted as, and might be diagnosed as bradycardia — but he survived until his eightieth year, albeit in poor health through most of his life. He was described as having 'delicate' health while a child and suffered particularly from neuralgia — complaining frequently of "sinkings" while at the Cape (Dutch "zinkings" — described by Herschel as "a most excruciating and distressing form of Rheumatism which is the great plague of this Climate")[25] — and endless rheumatism and bronchitis in England for the rest of his life — unlike his father who was robust almost to the end.

Drawings and photographs of him show a haggard visage, which gave a superficial appearance of a melancholic character, but at least within his family nothing could be further from the truth. There are many references to Herschel as a good family man, the following description by Maria Mitchell, a leading American astronomer, who visited the Herschels in 1857, is characteristic:

> After dinner the family assembled in the drawing-room, and the elder daughters were introduced to me. There were twelve children, although Lady Herschel seemed young and was still handsome; she must have been fifty years old. Sir John was at that time sixty-six years old, but he looked much older, being lame and much bent in his figure. ...In the evening we played with letters, putting out charades and riddles, and telling anecdotes. Sir John joining the family party and chatting away like the young people", and added "I could scarcely believe when I saw Sir John Herschel in his family, guessing conundrums with the children, playing at spelling, and telling funny anecdotes,

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the Hardcastle Archive, at Armagh Observatory.

[24] Letter Margaret Herschel to Thomas and Mary Baldwin (8 December 1833), quoted in: Warner, *Lady Herschel,* 19.

[25] Letter, J. Herschel to F. Baily, Royal Society Herschel Papers, HS. 3.138.

> that he was the same man of whom one had said to me when I first landed in England, 'He is living at Hawkhurst, not very well, and not very good-natured'. Probably the expression on his countenance of physical suffering has been mistaken for ill temper".[26]

Despite his poor physical health, John Herschel maintained his alert intellect. As if to re-establish his early proficiency at classics, in his late life he translated the whole of Homer's *Iliad* into English hexameter form, published in a 550 page tome[27] — even then looked on as an out-moded form, but accepted as a more accurate rendering of the original.

There is less latitude nowadays for scholars to reveal the full range of their talents — the demands of early and sustained specialisation in order to generate academic recognition probably limits development of alternate skills. There must be as many, indeed more, polyhedric individuals in the twenty-first century as in the nineteenth, but they are not as conspicuous. There were many in the 1800s who successfully combined talents both sides of the putative two cultures divide. If any vote is needed in Herschel's case, both the eyes and the nose have it!

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[26] Maria Mitchell, "Maria Mitchell's Reminiscences of the Herschels", *The Century* 38 (1889).

[27] J. F. W. Herschel, *The Iliad of Homer, translated into English accentuated Hexameters* (London: Macmillan, 1866).

"Near Feldhausen", watercolour by John Herschel. [28]

[28]A previously unknown Herschel landscape which is not included in his own catalogue of Cape Landscapes; the locale is inscribed on the back and it is signed JFWH (John Frederick William Herschel). From the Hardcastle Archive.

LEST WE FORGET: THE ART OF MEDICINE

By Kurt J. Isselbacher

I believe it is a valid assumption that most students applying to medical schools wish to become physicians because they look forward to caring for the sick with empathy and compassion and to be of benefit to mankind. In their altruism, they view their future role as healers who endeavor to provide comfort and support to those in need.

Unfortunately, in the last three or four decades and perhaps even earlier, those goals and aspirations seem to diminish and even disappear as students traverse their medical education and training. And as they emerge as bona fide physicians and finish their residencies, it is often hard to detect signs of their original altruism.

What accounts for this remarkable change from their original aspirational goals? What has happened to the motivation to become a compassionate healer? Although the individual physician may not be aware of this transformation, regrettably the change has become real and lamentable. In that context we have witnessed a gradual shift from medicine as a profession and calling to more of a business with doctors labeled "providers" and patients frequently referred to as "clients" or "consumers".

The practice of medicine goes back to the 5th century BC and to Hippocrates, considered to be the father of western medicine. In those times and for centuries thereafter, it was the art of medicine, not science that "cured" patients. In fact, it is noteworthy that the "Hippocratic Oath" being sworn to by physicians states that there is "art to medicine …and that warmth, sympathy and understanding may outweigh the surgeon's knife or the chemist's drug". [1]

In that context we should recall that patients have benefited by the ministrations of priests, rabbis or other faith healers as well as by

[1] Luis Lasagna, (1964), "Hippocratic Oath – Modern version", PBS Broadcast: pbs.org. wgbh.nova/doctors/oath_modern.html.

shamans, sorcerers and witch doctors. What is their secret? It is the power and aura of authoritative figures and the effect of their positive pronouncements. As long as patients place their trust in them, their proclamations provide comfort and sometimes even a cure.

Today is no different. Patients seek reassurance, support and guidance from their physicians, irrespective of the nature of the disease or its prognosis. Without it patients will feel adrift, as if at sea without a navigation system.

The art of medicine and its practice is developed by those who have an intrinsic desire and commitment to the healing process. It is a skill obtained by observation, apprenticeship and training. It is sharpened, fine-tuned and nurtured by experience. For the art of medicine to be applied effectively and with salutary results requires the establishment of a fundamental rapport between doctor and patient. It must be a relationship built on trust, confidence and mutual respect; whether this is possible often becomes evident at the first encounter. The physician must convey that personal distractions have been put aside and all attention and focus is on the patient's medical problems. How is this achieved?

An effective and thorough probing of a patient's physical as well as emotional issues requires time. Yet this is the very ingredient that is currently being shortchanged. Our medical system greatly undervalues the time devoted by the primary care physician (PCP) in evaluating the patient's illness, yet it compensates well financially for procedures and tests because they can be quantified. As a consequence, and as a means of responding to this inequity, the PCP on his or her own or at the request of the employer will see more patients per unit of time and hence has less time for any given patient. The result leads to dissatisfaction for both patient and physician.

Time is also critical for being able to listen effectively to the patient. It is a truism in medicine that listening to the patient may provide the diagnosis. Listening involves not only a thoughtful assessment of the patient's spontaneous comments but it also requires a careful questioning and probing of the symptomology. It should be a process

devoid of prejudgment and one that inspires confidence. In so doing the physician conveys concern and empathy.

The physical examination should be careful and complete with care and concern for the patient's modesty. However, in today's medical economic climate and with its commensurate time pressures, the physician will tend to curtail this examination, elect not to pursue his own inquiry in depth and frequently opt to refer the patient to a specialist, perhaps even before the underlying illness is adequately explored. At the same time laboratory tests and imaging studies will be ordered in an effort to expedite the diagnostic process and to compensate in part for a hurried history and suboptimal physical examination.

Yet a thorough physical examination is as valuable today as it was in the past. We know that the physician may observe subtle and even crucial findings often not revealed by a barrage of tests. Consider the importance of finding evidence of spider angiomata suggesting cirrhosis, palpating the "water-hammer" pulse of aortic regurgitation or finding abnormal proprioception in a patient with macrocytic anemia.

It is also important to emphasize that when tests or procedures appear to yield unusual or surprising results, the physician needs to consider whether these may represent artifacts or possible errors in interpretation before the findings are accepted as valid.

After analyzing the clinical data, perhaps the most critical aspect of the doctor-patient relationship depends on how the physician's diagnosis and treatment plan is communicated. The impact on the patient surely will be based not only on what he or she is told but on how the information is presented. Consider, for example, that the initial results suggest that the patient has breast cancer. A blunt and direct approach stating that "I believe you have breast cancer" will sound like a death knell to most women, no matter how stoic they are. It is better to consider phrases such as "there is something on your mammogram that suggests cancer, but we can't be certain until we obtain more information". The difference is slight but real. I am always amazed

how some physicians elect to transmit 'bad news' in a very insensitive manner. There is every reason for us to soften the blow when we express negative findings for the first time. We need to let the possibility of an adverse outcome or bad news first 'sink in' or be 'incorporated' into the patients psyche and then let the patient ask us for more details.

The totality of bad news can wait; it doesn't have to be delivered as a blunt instrument; and when it is presented, room should be left for hope and some potential for a positive outcome.

In the past, there were some who chided physicians for being negligent in 'truth telling'. It was suggested that we will be remiss in our duty as physicians if we hold back critical data or do not 'tell all'. However, I believe we should not impose information on a patient but rather provide it when asked and then to impart the data as sensitively as possible.

Finally, one of the most important aspects of patient care involves nonverbal communication, especially the laying on of hands. Touch is considered one of the most fundamental means of contact with our environment.[2] It is vital in childhood development as it provides feelings of safety and security; it serves many similar and other functions in nonhuman primates. We see evidence of its power in Michelangelo's Sistine Chapel portrayal of God's finger reaching out to give life to Adam.

We regularly witness the display of high-fives and hugs as ways to show support as well as sharing joy in achievement. So also in the practice of medicine, touch is a potent tool to be used and fine-tuned with experience. The physician's gentle touch on an arm or the squeezing of a shoulder conveys a message of support, compassion and sharing. Such simple tangible acts tell the patient, "I care".

Knowledge of the scientific basis of medicine is essential for arriving

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[2] M. J. Hertenstein, R. Holmes, M. McCullough and D. Keltner, "The communication of emotion via touch", *Emotion* 9 (2009): 566.

at the correct diagnosis and prescribing objective treatment. However, the ability to convey compassion, empathy and inspire trust is critical for the healing process. In fact, the healing process is incomplete without the application of the art of medicine.

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THE SOUND WE HEAR

By Ken Owen

This essay is intended as a tribute to Stuart Saunders for his pioneering role in the long process of political and social transition in South Africa.

Having reached an age at which one tracks old foes mainly through the obituary columns, I watch with equanimity, even amusement, as South Africa under the African National Congress government blunders along much the same path of folly as it did under the National Party. Few people learn from others' experience; we don't learn from our own.

Julius Malema's demand for nationalisation of the mines echoes the same demand in 1938 by Nico Diederichs, later to become President of South Africa and a rather shabby bankrupt. The impulse in each case was the same: a sense of victimhood and envy of richer communities.

Diederichs had been a student in Nazi Germany, where he was deeply impressed by the assertion that poverty and deprivation persisted because the world economy was in the hands of Jews. That thesis slotted easily into the belief in South Africa, especially strong among Afrikaners, that "Hoggenheimers" dominated the local economy.

As late as the 1980s Professor Sampie Terreblanche of Stellenbosch was still railing at the economic dominance of "the Jews and the English", both of which groups had proved remarkably resourceful in hanging on to their assets under Afrikaner political dominance.

Today, black South Africans rail in much the same terms against the economic domination of white South Africans. In both cases the complaint was justified. Ever since the advent of democracy transferred political power into the hands of black people, whites have grown richer — some of them spectacularly so — and the wealth disparities on average have widened.

But the situation is more complex than it seems. The very richest class is mainly white, but whites make up less than half the wealthiest fifth — the top quintile — of the population. Most people in this class are Indian and, lately black.

Also, the rich white population is dwindling (the birth rate is way below replacement level) and ageing. The 2007 mini-census showed no more 20-year-old white men than 60-year-olds, so the retiring baby-boomers cannot be replaced from their own ranks. The mini-census produced a distorted population pyramid that showed astonishing numbers of white men, and almost as many white women, between the ages of 20 and 34 had simply vanished.

Well over half the white population is over 40, and those under ten constitute only 4.7% of their age group. The white tribe is liquidating itself.

Emigration explains the missing young adults. They leave immediately after completing tertiary education, or as they begin to worry in their late 20s or early 30s about the education of their children, and about the safety of their families. The popular image of a white grandmother weeping in front of her fridge as she stares at magnet photographs of her grandchildren has basis in fact.

Most of those who remain in the "leafy suburbs", if I may generalise about the middle class, approach retirement with modest assets: a house, a pension, and a relatively small amount of savings held mainly in unit trusts. Almost all the shares on the Johannesburg Stock Echange are held by institutions, or by foreigners, not by white suburbanites.

At or after retirement, they sub-divide their properties, down-size their houses, or move to gated communities and retirement villages. Spare funds are often used for air fares to see children in California or Sydney or Britain. When they die, their assets go to their children abroad.

Taken as a group, they are desperately insecure and fearful of the future, seeing themselves as targets for heavy taxation, discrimination, and criminal attack. Their fears, like the general perception of their wealth, are exaggerated but it is true that they face continuing social and political upheaval, the outcome of which is uncertain.

Two factors are at play here. The first is that the structure of the South African economy has remained essentially colonial, driven and directed by a small elite — first Dutch, then British, then local English, and finally by an uneasy alliance of Afrikaans and English. The colonial structure has survived great political upheavals, although the composition of the elite has evolved and is still evolving as blacks penetrate its ranks.

The second factor is tribalism. South Africa is less a nation than an agglomeration of disparate tribes, riven by collective envies and rivalries. The tribes watch each other, perpetually adding up the score to see who is gaining, who losing.

From counting the number black faces (or Indians or Muslims) in the national sports teams, to complaints about the "Xhosa Nostra" under Thabo Mbeki and prominence of Zulus under President Zuma, to the perpetual calculations of wealth distribution among the races, the symptoms of tribal envy and resentment are a daily phenomenon of South African life. In the end, tribal allegiance trumps all else.

At its crudest, tribal envy expresses itself in the sentiment: "They've got it, we want it". That attitude, combined with a semi-literate belief that poverty can be overcome by a mere transfer of assets, underlies, for example, the foolish government actions that have sent the once-great mining industry into decline, or ruined once-thriving farming estates.

The sense of deprivation that drives such folly is neither new nor unique to black people. When the National Party came to power in 1948, Afrikaners were afflicted by a similar sense of deprivation. Even under Afrikaans rulers like Botha and Smuts, most Afrikaners "felt" that the country was actually run by and for English-speakers (and, in

the eyes of people like Diederichs and Terreblanche, Jews).

In the 1950s the prospect of nationalisation of the mines by an Afrikaans government seemed so threatening that the Oppenheimers, in a celebrated act of statesmanship, arranged for Afrikaners to acquire their own mining house. It brought their most dangerous foes into the fold.

Today, black economic empowerment, stemming largely from a famous meeting at Brenthurst, the Oppenheimer home, serves much the same purpose: it transfers ownership of assets to blacks and so creates a powerful vested interest in the survival of the system.

The beneficiaries, the so-called "black diamonds", have immediately become part of the economically dominant elite, more ostentatious in their displays of wealth and status, but no different from the dominant economic and financial class of which they are now part. The exploitative colonial character of the economy has survived another challenge.

But political power has its own imperatives, foremost among them a terrible fear of the loss of office, and all the privileges that go with it. Like the National Party after 1948, the African National Congress has moved to consolidate its hold on power by affirmative action, appointing an array of its supporters to key positions within the power structure, and "deploying" obedient party hacks to do its bidding. This, too, is neither new nor unique to black government.

In 1948 the National Party moved swiftly to consolidate a paper-thin parliamentary majority, immediately stopping most immigration from a war-shattered Britain in order to limit the growth of the English tribe while extending parliamentary representation to the mainly Afrikaans whites in Namibia.

It also carried out a lightning purge of the armed forces, sending despatch riders in the night to deliver notices of dismissal to English officers, many with combat experience which their Afrikaans replacements lacked.

English civil servants were replaced more gradually, some kept until replacements could be trained, others because they were approaching retirement, but by the early 1950s younger English-speakers, I among them, could see no future in government service and switched to the private sector.

For the National Party, the secret Broederbond played a role similar to that of the National Executive Committee of the African National Congress: it ensured that hand-picked Afrikaners, bound by oaths of loyalty and secrecy, were infiltrated into strategic control points throughout government and the wider society.

Legislation followed to preserve the jobs of less skilled whites, and to protect them against competition from black people. Even coloured traffic cops lost their jobs.

Municipal bank accounts were switched from "English" banks like Barclays and Standard, to Volkskas, now defunct, and contracts were steered to Afrikaans interests. A key official in Pretoria told me at the time when Indians, mainly traders, were being moved from the city centre to faraway Laudium, that it was being done to ensure that "Indians will never again dominate the retail trade".

Behind the racial ideology lay naked greed which, combined with centralisation of power, secrecy and short tribal lines of communication, generated pervasive and growing corruption. The procurement of food for the prisons department, or medical supplies for hospitals, or of strategic stocks to beat sanctions, became the path to fortune for people who would now be called "tendepreneurs".

Close ties were forged with an array of international gangsters, like Mark Rich (later pardoned by President Clinton), Marino Chiavelli, arms smugglers, oil dealers, and convicted Mafiosi, contributing to a culture of underhand dealing that was the mark of the later years of NP rule.

Once when I was bumped up to first class by Cathay Pacific Airlines (I was late at check-in), I found myself surrounded by government ministers and top officials, including the chief of police, most of them looking forward excitedly to a sanctions-busting shopping trip to the Far East — behaving, in fact, as Robert Mugabe and his wife do now. The outrageous shopping trips to New York and London of the African National Congress elite are nauseating, but not unprecedented.

In the course of a generation the Afrikaner elite had become wealthy and, like all nouveaux riches, liked to show off. In Pretoria even civil servants, it was said, measured status by having "a Merc, a cycad (broodboom) and a heart bypass". In the Cape it was wine farms, Afrikaans culture, and the history of the tribe.

However, trying to prosecute members of the National Party inner circle was as futile as trying to prosecute President Zuma's cronies today. Published evidence of corruption was ignored or whitewashed. Nobody objected when I described the National Party elite, accurately I thought, as having "their snouts in the trough and their backsides to the nation".

Addressing a parliamentary committee in 1994 at the invitation of Gill Marcus, I tried to warn that the National Party had turned government, with its network of parastatals and subsidiary organisations, into a giant machine that sucked up revenue and distributed it to its favourites. I feared that machine would pass intact to the new ANC government.

And so it did. Government service is now the main path to quick riches for any person who can establish close relations with the ruling elite. Understandably, competition for positions within government has become lethal, as the decapitation of former President Thabo Mbeki demonstrated.

Hardly a day passes without fresh evidence of corruption and looting. I cannot say that the African National Congreee is more corrupt and avaricious than the NP — for one thing, a free press can expose much more than the hobbled press of National Party rule — but it is more

crass, more ostentatious, and more concerned with the trappings of wealth, the mansions, the limousines, the convoys and outriders, the bodyguards, and the baubles.

The new moral lacuna was vividly depicted recently in a photograph of a near-naked blonde sprawled across a luxury car so that black men could suck sushi from her belly. It said a great deal about the racial fantasies of sex and power in the minds of the new elite. They have gone from deprivation to depravity in a single leap.

Both the African National Congress and the National Party saw the judiciary from the start as a centre of power and they moved to consolidate their hold on it. The African National Congress' insistence on appointing African judges to all the senior judgeships, and the drive to achieve a numerically representative quota of black judges (even at the cost of rejecting highly qualified white "struggle heroes" like Geoff Budlender), echoes the NP's packing of the courts with Afrikaans judges whose qualifications, in the biting words of Sydney Kentridge, "were not evident to lawyers".

The controversies that attended the appointment of Chief Justice L.C. Steyn were remarkably similar to the current disputes surrounding Judge Hlophe and continued for decades. Faith in the courts was so undermined that some of the most eminent lawyers in the country, Kentridge among them, refused appointment to the Bench. Judge Johann Kriegler's recent efforts to rescue the rule of law and the reputation of the courts from African National Congress manipulation are in some ways comparable to the efforts by the former Chief Justice, Albert van der Sandt Centlivres, to rescue the rule of law when the National Party packed the courts and the Senate so that it could change the constitution in order to strip the Coloured people of their voting rights.

Even the cynical release of Shabir Shaik on spurious medical grounds has a precedent in the National Party's equally brazen early release from prison of Robey Leibrandt, a Nazi secret agent who, after training in Germany, was landed on the West Coast by a submarine during the war.

The case is largely forgotten now but it branded the National Party government in the eyes of foreign governments, not to speak of the local opposition and ex-servicemen, as sympathetic to the Nazis. The taint never quite wore off.

If faith in the courts and the administration of justice faltered under the National Party, respect for Parliament almost collapsed after the packing of the Senate. The cynical manipulation of the law to evade constitutional protection of Coloured people's rights made MPs objects of derision and a rich source of material for cartoonists.

(It also, incidentally, drove Coloured people into extra-parliamentary opposition, some of them with the African National Congress, and towards the use of English. It was a huge blow to the interests of the Afrikaans language, one that may yet prove terminal).

Unlike the legislature, the executive branch of government was able to command respect through fear, and still does so. The National Party, though its MPs were answerable to constituencies, kept them in line through a tight caucus where Broederbond oaths of allegiance reinforced party discipline. Speeches "thanking the Minister" became a popularly caricatured feature of National Party backbenchers' participation in parliamentary debt. Real debate did not take place outside the caucus.

The African National Congress exerts similar control more directly. As Mathews Phosa has said, "there is only one centre of power" and that lies at Luthuli House where party bosses "deploy" people to Parliament, determine who will be Speaker, and keep MPs in line. Policy debates take place in the national executive committee, out of public sight, and policy directives are passed to Parliament. Backbench MPs "thank the Minister", frontbenchers make sure they do.

Under the National Party, South Africa could best be described as a racial oligarchy; under the African National Congress it is at best a crippled democracy, where the President can be deposed by a handful of votes in a party conference.

There is continuity in the inability of South Africans to establish and manage a fully functioning democracy. In both cases, Parliament has been reduced to an instrument of the party, not of the people.

A remarkable similarity is evident, too, in the manner in which both the Nationalists and the African National Congress have reacted to public criticism and, at a trivial but revealing manner, to public scorn as expressed especially by cartoonists. Neither party has seen any utility in changing its own behaviour in order to earn respect; both have preferred to kill the messenger.

In the 1960s John Vorster, an intimidating presence who had introduced detention without trial to suppress political activity by both the Pan African Congress and the African National Congress, set out to bully and intimidate the management of opposition newspapers into softening their opposition. On his orders, the celebrated editor of the Rand Daily Mail, Laurence Gandar, was fired.

Two independent newspapers that stood outside the mainstream, the communist "New Age" and the liberal "Contact", were shut down, and the mainstream publishers were forced to accept a fatuous "code of conduct" to be enforced by a Press Council.

However, the National Party found that controlling journalists was like herding goldfish. Every new control measure was evaded or undermined or ignored, and the National Party found itself moving steadily toward outright censorship.

The effects were perverse. The government's own credibility was destroyed and its main mouthpiece, the South African Broadcasting Corporation, became an object of derision. Lasting scorn fell on those who worked there.

The African National Congress, having learned nothing from this experience, has made the South African Broadcasting Corporation the focus of its efforts to silence criticism, and has fallen back on the bullying and the intimidation, and the discredited notion of a "code of conduct" to be enforced by a tame tribunal.

It is doing the same things as the National Party and hoping for a different outcome, which is a popular definition of insanity.

Apartheid entailed the misallocation of resources, the waste of capital, on a scale unmatched outside the communist countries. The cost of moving (literally) millions of people hither and thither, the duplication of services, the doubling or even quadrupling of toilets and bathrooms, entrances and exits, hospitals, schools and universities …the list is endless.

Apartheid required an immense, expensive bureaucracy, a diversion of police resources into enforcement of bizarre laws including pass laws, and in the end it required conscription, an arms industry and a smuggling network to maintain the system. Revenue was squandered on arms purchases, even on useless but expensive nuclear weapons, and on the distortion of economic life to meet the requirements of racial ideology. Again, the list is endless.

Even in combination with corruption, it took decades to exhaust the remarkable natural potential of the South African economy but towards the end the ruling elite could no longer collect taxes efficiently, or maintain public order, or service the crumbling national infrastructure, and economic growth came to a halt. The National Party gave up power because it had to. It was finished, and it handed to the African National Congress an empty treasury, an obsolescent infrastructure, huge debt and no foreign reserves.

The effect of the transfer of power in 1994 was temporarily galvanising, partly because it quickly freed the country of much of the burden of apartheid, partly because the international community rapidly resumed relationships, and partly because the end of apartheid brought into use the talents of many people of colour. The burst of new energy was palpable.

Tax collection improved dramatically, the treasury steered the country past the threatening debt trap, the national reserves recovered, and confidence soared. Growth resumed and even unemployment (by the

standard measurement) came down from about 32% to 24%. Corruption was worrisome at first but not overwhelming and Mbeki's team seemed to have at least an outline of long-term objectives. The achievements of his administration have been underrated.

But new social forces of near-revolutionary strength had been unleashed by the emergence of fabulously wealthy "black diamonds", and by the appointment of black people to parastatal and government positions at salaries that, to township dwellers, seemed beyond the dreams of avarice.

As they watched the new class of rich blacks pass in their limousines, or read of their antics in the newspapers, the former elites of the townships — teachers, nurses, social workers, policemen — found themselves regarded as losers. The young, their expectations soaring, looked to government service, to affirmative action, to Black Economic Empowerment, to deal-making, for their careers.

In the contest for newly available wealth even rich black people, their children at private schools, their garages filled with sports cars, claimed further privileges on the grounds that black people — not necessarily themselves — had been most oppressed by apartheid. As a black columnist noted, "professional blacks" traded on their blackness to get rich.

The working class, including the demoralised semi-professional nurses and teachers, turned to their unions for protection, generating strikes and wage increases which were perhaps justifiable but not necessarily sustainable. To dampen disaffection, welfare benefits were extended to a quarter of the population, and President Zuma promised to create millions of jobs — a promise generally seen as empty.

The power struggles at the top of the pyramid which had brought President Zuma to office were soon complemented by a wider struggle in which the labour unions and elements of the Communist Party, as well as the disaffected semi-professionals, began to voice open criticism. The outlines of class struggle began to emerge in the black community.

At long last the colonial structure of the economy was being seriously challenged.

This being South Africa, however, class struggle is overlaid by tribal contest, and to some extent concealed by it. The latent Africanist tendency in the African National Congress has come to the fore in the clamour for swifter "transformation" which is increasingly cast in terms of race: "they have it, we want it". In some recorded cases, competent white employees were fired to make way for blacks whose expertise was no more than a promise.

Black intellectuals use the word "racist" like a whip, just as Afrikaners used to use the word "Boerehaat", to cow their opposition, driving most whites out of the political debate. With a handful of exceptions, educated whites now avoid public discussion of the great political issues facing the nation. Instead, their political passions are directed into politically correct denunciationsof nuclear energy, or "big capital", or the Americans and the "Washington consensus", or people's attitudes to "fynbos". Israel still attracts trenchant, intelligent debate, and so do gender issues, but Christians tend to avoid the former, and men the latter.

Among those cowed by the "racist" whip is, ironically, the University of Cape Town. Once at the forefront of the fight (led by Centlivres and Stuart Saunders, among others) for non-racial admission to the university, the University of Cape Town has lately been cowed into demanding that white applicants must meet a higher entry standard than Indians, who must meet a higher standard than Coloureds, who must meet a higher standard than blacks — the old apartheid classifications, inverted. The policy would, if consistently applied, favour the child of Jimmy Manyi who played no part in the liberation struggle, or Julius Malema who was 10 years old when apartheid was abandoned, over the offspring of Mac Maharaj or Trevor Manuel. It favours the children of "black diamonds" who come from the best private schools on the grounds that they are "previously disadvantaged" over children from the Cape Flats.

University staff admit it excludes some whites who, on merit, deserve to be admitted, and does so solely on the basis of race. They do not admit that they have been cowed into ensuring that the campus must become predominantly black and they hotly defend the policy. But if one substitutes the words Jews, Muslims and Roma for whites, Indians and Coloureds, the intellectual origins of the policy become uncomfortably clear.

An admissions policy based on poverty, not race, would have produced much the same result, without entrenching the absurdities of unscientific race classification, but reverse race classification is what is intended. There could not be a sharper spur to emigration.

All sensible South Africans know that affirmative action is a moral and political imperative. Affirmative action programmes at every level of society have produced literally tens of thousands of successful black people who serve the country well and who are rapidly taking over the role of commanding elite, but still the need for skills is greater than the supply. The loss of skilled people, mainly white but also Indian, harms the development of the country and its economy, and will do so for as long as the supply of skilled black people does not compensate for the loss.

Given the condition of the schools, that day is some way off, so the process of affirmative action, pursued without regard to the fears or interests of the minorities, does not expand the skills base. It simply changes the racial composition of the elite while preserving the power relationships of a colonial society and privileges of the ruling class: a small rich class still sits atop a vast underclass which provides labour at low cost and low efficiency. The black elite are beginning to mutter about problems with domestics.

Meanwhile the quality of government across a range of technical functions continues to deteriorate for lack of skills, to the point where water quality has become questionable, record-keeping is often chaotic and open to fraud, and some municipalities have virtually collapsed.

Underlying the campaign for affirmative action — for jobs, free

tertiary education, land distribution, subsidised housing, free health care, and much else — is a rising tone of anger about the way the country is being run.

The cry of racism is a mere diversionary tactic. It is intended to mask a wider conflict, an emerging class struggle in which the main target is the richest quintile, the new privileged class, of whom the majority are not white.

Turmoil in the streets has become a steady, if distant, rumble of discontent, some of it organised by trades unions, some by the African National Congress Youth League, but mostly by angry local groups protesting at simple grievances. South Africa's transition to democracy has left the vast majority of its people out in the cold, and a newly awakened proletariat is flexing its muscles.

For South Africa's richest quintile it carries a warning. The sound they hear is the clamour of the poor at the gates of privilege.

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PICASSO'S MUSIC

By Philippe-Joseph Salazar

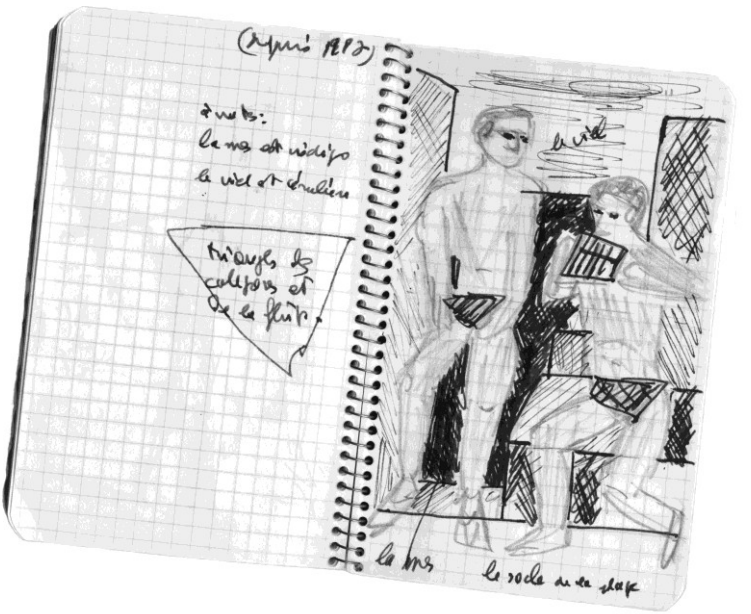
This one-minute story is dedicated to Stuart Saunders's love for painting. I hope he will forgive me for trusting words more than pictures. It is also an indirect and tardy response to the gift Edmund White made me of his Écorché vif *(original,* Skinned Alive)*, on a bright winter day of 1997, not far from the Picasso Museum in Paris.*

"At a recent exhibition held at Palazzo Grassi, in Venice, one could appreciate, in a less crowded setting than in its original home, Musée Picasso in Paris Marais district, Picasso's *Panpipes Player* (1923). The painting is well known, it is fridge magnet stuff, but let me indulge you with a presentation, and there is no need for you to look at the slide, unless you want it for your fridge, just listen", said the lecturer.

"Two young men, naked but for a loin cloth, one standing on the left, the other sitting on the right. They are the characters in the composition. The standing figure holds himself in counterpoise, his right leg thrown forward. He watches the other young man play the pipes. The second figure's legs are placed at an angle, in the customary attitude of music players who balance themselves and their instrument by folding a leg under their chair and placing a foot forward. In this instance, the piper is sitting on a rectangular parallelepiped washed in greyish umbra with another cube of the same colouring behind it. The young men are framed by two pale yellow ochre rectangles, two walls one assumes, the top of which slopes away toward the imaginary middle of a blue rectangle, the sky, itself set above the darker blue of the sea. The sea forms a square framed by the walls. In the foreground a slab of the same sandy hue as the wall is in alignment with the base of the parallelepiped seat and shows the neat line of what must be a step down towards the Mediterranean. There are seven horizontal planes.

The painter's Greek geometry is unnervingly exact. For instance, the length of the parallelepiped is half the width of the canvas. The far away end of the walls equals this width. The line of horizon, that is the

side of the square sea, is equal to the parallelepiped base plus the slight gap left by the painter on its right, as the seat is placed off centre. In addition, because the player's feet are set within this line, the piper is inscribed in a rectangle of perfect proportions with a base two-thirds of its height. The standing figure is inscribed in an elongated rectangle the base of which is two-fifth of its height and itself equal to the width of the canvas, allowances having being made for brush strokes and outlines that are not as precise gestures in the modern idiom as they were in classical art.



Journal, XXX; sketch

In short, this is a deceiving painting. The idea we get of its subject is not what we see. Hence, the necessity to use our inner gaze, and to… switch off the projector! Thank you, Paul, you can now sit down. Words suffice. Images are palliatives.

Listen all. At first glance the painter has given us his treatment of a typical Greek theme, which has a long history in his practice, down to the palette itself – blue of the two light elements, yellow and brown of the earthy element, reddish pink of the human flesh. The white of the

woven loincloths is a reminder perhaps of the dark reeds of the pipes, of the wild vegetal reign, now processed and domesticated. Nonetheless, this subject matter is of the sort you could expect to encounter around 1925 when there was a quirky Mediterranean Neo-Classical revival among Cubists, Surrealists, and even Dadaists. Think of Jean Cocteau's drawings, or for that matter Picasso's drawings on the piper's theme. Think of the rediscovery of arch-classical Poussin at the same time. Think simply of Matisse.

However, as we all know, Picasso was keener on painting women, his mistresses, than men, unless they were surrogates of himself, with bullish genitalia re-enacting the legend of the Bull who seduced Pasiphae, and begat the Minotaur.

Men in his paintings or drawings are few in numbers and sexually puerile. As you are aware, his son and grandson had awful, emasculated lives at his mercy. Why has he chosen this subject matter? The Panpipes may be the key. Let me hasten to dispel any suggestion that the reeds are phallic symbols and so on. This has no meaning at all in this case, as nothing else in the composition points in that direction. The two young men are perfectly poised. Phallus, or lack of it is not their business.

At the centre of the canvas are the reed pipes. The painting is silent, as it should, *muta eloquentia*, but the player blows softly into the reeds, so music there must be. The painting makes music. However, you will only hear the melody of the reeds if you open our eyes deeper into the idea, if you allow me this turn of phrase. Remember that the words, and concepts, of 'idea' and 'vision' come from the same Indo-European root — in fact our own 'idea' is a noun formed on the verb '*videre*', in Latin 'to see'. An idea is an inner vision. This is why the visual arts are palliatives.

Let us open our eyes into the music of the pipes. Are they pipes, those tied up reeds? The exact name for the Panpipes is the syrinx. Pan played music on a syrinx because a nymph called Syrinx preferred death to rape by the hoof-footed creature. As he gave her chase on the banks of a river in Arcadia, she implored the gods, and one river-god

who was her father came to her succour. Pan, reaching for her hair, caught an armful of freshly sprouted reeds and Syrinx's pliant body escaped him. Yet, while mourning the loss of his object of desire, and to ensure some sort of triumph by Eros over Nature, and by passion over piety he cut the reeds and invented a musical instrument of a sound as soft and as plaintive as the sound of winds blowing through reeds at sunset. He had to be satisfied with the sound of his own lament, or perhaps hers, played upon seven unequal reeds.

Don't you hear it, don't you see it? The canvas is a stave, extended to seven lines, orchestrated by the rhythmical division of the canvas into seven horizontal planes. The painting begins to sing. Do you hear the melody of the reeds?

Consider now that a Greek pipe is not a modern flute, that our two young men, player and listener, two shepherds perhaps from a modern Arcadia, now making music by the sea in Provence as they would have by the banks of that fatal river, had a different ear for music than we do.

Poussin, the sublime Neo-Classical painter whose revival was so crucial to the works of Cézanne and Matisse and Picasso and Braque, had a conceit of painting just as mental as Cubism's designs. In a letter to one of his patrons, Poussin wrote on how the Greeks made music. He is a painter who, instead of explaining to his patron why and how he paints canvases considered at the time odd and possibly a bad investment, 'Pagan' even, expatiates on music.

Poussin describes how Ancient Greek music had five modes to which were affixed specific passions and attached specific instruments apt to arouse these very moods. The syrinx, in this instance, plays in hypolydian, a mode 'which contains in itself a certain suavity and sweetness that fills listeners with joy'. Let me correct myself. Poussin wrote 'viewers' not 'listeners', for he is writing about modes or moods of painting, adapting to his silent art the modes and means music harnesses to mould moods in our hearts.

Our two young men are making suave and sweet music. In fact, the

mood procured by the mode is as much that of the listener on the left as it is ours. A simple equation, again numbers at play, makes us listeners and viewers. Yet, suavity and sweetness do no imply sentimentality, which belongs the ionic mode. This distinction is subtle but makes it all the more important for us to tune in more finely to the music of the canvas.

The hypolydian music is that of joy. Now, to understand 'joy', I have to turn to Poussin's contemporary Descartes whose philosophy, by the way, underwent a similar revival in the 1920s: 'Joy consists in the agreeable emotion the soul experiences in conceiving the enjoyment of goodness'. The 'passion of joy', says Descartes, is not in possessing something we conceive as good for us, but in the emotion the thought of such possessing brings us. It is therefore a 'fundamental passion'.

Shall I take stock? Eunice, if you are not interested you can leave… Thank you. I can see that your attention is flagging. Let me recap.

Pan did not ravish Syrinx. Syrinx becomes a syrinx. The syrinx plays in hypolydian. The hypolydian expresses joy. Joy is not about possession but the thought of it, like Pan's sublimating Syrinx's rape in music. Of the rape, Pan will never possess anything else but the thought of the joy it would have procured him.

As for the young men in the painting, there is a telling sign of their joy, in the colouring of their skin. In a painting, like in any true design, nothing is placed at random. The young men's bodies are flushed with blood, certainly not on account of some sun-tanning session on the Côte d'Azur but because, Descartes again: 'Joy renders Colour Vivider & Vermillion, for it opens the sluices of the Heart, makes Blood hasten its Course through the Veins; and, increasing in Warmth & Subtility, Blood swells moderately the Face; which gives Joyfuls a Smiling & Gay Countenance'.

The two young men in the painting are representations of the effect of joy. They are shepherds of Arcadia, the joyful land, where the syrinx echoes to the strains of hypolydian melody.

In the Greek idea of a well-tended land, and this idea runs right down to actual agrarian reforms in 18th century Physiocratic economy and the rise of what we now call management, such humanly tended land, conducive to the joy of being social, is cultivated in hypolydian. People enjoy making goods that satisfy their needs if not their desires, they enjoy each other's intercourse, they produce enough to consume and reach happiness. They are not *rentiers* who live off safe rentals or capitalists engaged in risk taking. They have no desire to possess more than is necessary to live well, without the encumbrance of heritage or year on year profits.

One problem remains; where are we, you and I, in this painting? What is our joy? What goodness are we supposed to enjoy, and not possess? Are we merely duplicates of the two young men in joy, the player joyful from listening to his own suavity and his companion to the music?

There is an answer, and the canvas provides it. The visual logic of the painting places us on the same plane as the two men: the foreground is level with our own ground. The two young men are only one step away from us. We stand together at the edge of a utopian space, Arcadia.

You see, if I were a cultural historian and willing to explain this tension in happiness, I'd hang my hat on the Roaring Twenties, on economic growth, indeed on the optimism and consumerism and the 'we danced all night' approach epitomised by Miss Barbara Cartland in her autobiography bearing this very title — all that set against the first signs of the approaching Great Depression. No, I will not, I am not writing for *The Economist*. The art of the painter suffices.

The true question therefore is: Which rape are we denied, so that the reeds, the Panpipes, the melody and happiness are possible? What is the nature of this cruel exchange? Suavity is not a given, it is the result of a dolorous swap. Syrinx has exchanged her body, her hopes, her mind, and her freedom against not being violated. She is the forced instrument of suavity and joy and sweetness, of Arcadia, of the perfect state of human and social happiness, because she has called onto being sacrificed. Rape has been denied. Pan is a passionate flautist because he was a dispassionate f***. Pardon me. Alliterations are my foible. Can

you hear the music clearer now? What violent desire and what chaste integrity have been denied so that peace can prevail in Arcadia?

Can you see, now, that the seven-reeded flute is not Pan's only instrument? Pan is also credited for being the first military strategist. Having devised the art of dividing an army on the battlefield into two wings – in imitation of the two horns he wore on his head –, he also invented propaganda to spread fear among the enemy army. Long before loud-speakers were used in the Korean War to sow disinformation, Pan used echoes in Arcadian valleys to multiply the shouts of his battalions, to make one man sound like ten, and to cause what was called 'panic attacks' among his enemies.

Pan has therefore two instruments at his disposal. The pipes, which tell of peace acquired at the expense of a victim, and the illusion of sound, which helps bring about peace through strategies of cleverness and deceit. It is no surprise then that the seven-reeded flute is considered in Ancients Greek musical theory as cosmic harmony itself, or the music of the seven planets. You play the flute, you play the universe and since *kosmos* means order and beauty, you play order and peace. But again, at whose expense?

The painting sings louder now, does it not? It sings to us of violent self-renunciation and painful growth. Do you understand now why the sitter is a youth and the figure standing a young man?

The other, inner music of the painting is that of a transition between the ages of life. The player is the past of the *contraposto* character; he is at rest in the path of life while the listener is poised to walk on. The youth has his back against the two sturdy blocks of stone, steps that will have to be mounted. The young man has his feet next to the step that leads to the open shore he is returning from and toward which he is leading, at the sound of his pipes, the younger man: he charms him to an *Embarquement pour Cythère* — you do remember my lecture on Watteau, I hope — to the indomitable sailing of life, *l'âge d'homme* as Michel Leiris puts it.

Let me bring together the facets of the idea I have tried to make you

envision: to grow is to wage war over oneself and to renounce what we are and what we possess — freedom and virginity, integrity, like Syrinx — and to accede to joy — being the idea of what we think is good, even though we have to relinquish our previous shapes. However, this growth occurs under urgency, in a violent gesture of refusal, when those who are supposed to protect us, like Pan who guards the valleys of Arcadia, are the real aggressors.

When we are faced with that awful reality, life turns on its hinge. Nothing will ever be the same, and Arcadia is tainted forever. A new landscape is opening up, onto a sea, with steps down towards an unseen shore, uncharted voyages and charted ones that turn into errands. This is what the painting you have in front of you is telling us, in the crying of Syrinx that cannot pass for the sweet melody of a syrinx. This is the most violent of paintings, it skins us alive. Don't be fooled, though. This is Joy itself".

The lecturer took out a pack of fridge magnets, left it next to the lectern, walked out, *écorché vif*.

PHILIPPE-JOSEPH SALAZAR was educated at Lycée Louis-le-Grand *(Paris). A past Fellow of* École normale supérieure *where he was tutored by Louis Althusser he studied philosophy under Emmanuel Levinas and semiology with Roland Barthes. An opera critic and author of a libretto,* Icare *(Paris, 1981), he is a political chronicler for French intellectual magazine* Les Influences. *A sometime director in Rhetoric and Democracy at* Collège international de philosophie *in Paris, Jacques Derrida's foundation, and a former Dean of Arts at the University of Cape Town (South Africa), he is presently a Distinguished Professor of Rhetoric and Humane Letters at the same institution. Laureate in 2008 of the Harry Oppenheimer Fellowship in recognition of his pioneering work in Rhetoric.*

ONE WAY TO THINK ABOUT PHILANTHROPY

By Don M. Randel

There is, of course, more than one way to think about philanthropy. What follows is, therefore, a personal view, and it differs a good deal from views that are widely held these days. It derives from my experience of having been "on both sides of the table": five years as president of the Andrew W. Mellon Foundation and six years as president of the University of Chicago. Others, depending on aims and experience, will have very good reasons to hold a different view. I only wish to offer some aid and comfort to those made slightly uncomfortable by the currently dominant discourse.

Both philanthropy and higher education are subject to fashion, much of which comes in waves from the world of business. This is understandable because trustees of both kinds of institutions often come from the world of business and suppose quite naturally that the application of current business practices to philanthropies and institutions of higher education would cure their many ills. By this I do not mean to suggest that philanthropies and institutions of higher education are not businesses. They certainly are. But it is essential to understand what kinds of businesses these are. For a start, the underlying logic of for-profit businesses and not-for-profit businesses is inherently very different, and much else flows from this quite naturally. This might at a minimum call for more modesty when pointing the finger across the boundary between the two.

If one doubts that business is subject to fashion (one might even dare to say mere fashion), one has only to look at one's shelf of business books accumulated over a few decades. One might similarly review the qualifications and management styles of the leading CEOs of the last few decades. Most of these books have very short intellectual shelf lives for all of their momentary popularity. Yet they often come cloaked in a kind of moral superiority suggesting that one is both incompetent and morally bankrupt if one does not subscribe wholly to the view being advanced. The waves of "total quality management" and "continuous improvement" were good examples. They were not devoid of valuable insights. But they were preached and promoted by

armies of consultants in ways often reminiscent of old-time religion and its revival meetings — you must hold hands with the person on either side of you and *believe,* and if you don't there is the clear likelihood that you will go straight to Hell. "Strategic planning" has proved more durable but has had some of the same features. Every business, whether for-profit or not-for-profit, must plan for how it will carry on its affairs over a certain time horizon. The problem with many strategic plans, especially in the for-profit world, is that the time horizon is not nearly long enough. But in the worst of cases, it can lead one to reduce complex matters to slogans, which, once adopted, can blind one to the continuously shifting landscape if not the actual earthquake going on around one.

Some of the currently fashionable words having a particular effect on philanthropy are "impact", "assessment", "entrepreneurship" and "venture". They will be found in the course and reading lists of every business school and on the websites of a good many foundations. It is not that these terms are meaningless. But they have much to do with the ways in which enormous wealth has been created by some individuals who then (blessings upon them) wish to become philanthropists. They have solved one very concrete problem — how to make a lot of money in some particular line of business — and they suppose that life consists for the most part of similar kinds of problems that are amenable to similar kinds of solutions. Most of the world's truly serious problems, however, are very much harder. The philanthropist who limits his or her field of vision to problems even of the dimensions of how to take a company from startup in a garage to a market capitalisation of many billions will misjudge the nature of many of the world's problems and simply ignore a good many others. Finally, it must be said that a great deal of wealth has been created by standing in the right place at the right time, or having genuinely incompetent competition, or benefitting from inappropriate power and influence. A genuine philanthropist does not get to accomplish things by any of these methods, for the enemies to be overcome ultimately reduce themselves to suffering and ignorance, which are implacable and implacably complex.

The philanthropist may, of course, choose to solve a problem that is well defined and demonstrably solvable. One can reduce the number of children's deaths from malaria in the developing world by distributing mosquito netting at a quite low unit cost. It will be possible to count the number of nets and their costs and reasonably estimate the number of lives saved. Who could not want to see such a thing happen? Suffering will have been reduced. But what about the ignorance in which these children may live out their lives even if they are healthy? That is a much more difficult problem that afflicts the developed world every bit much as the developing one. And if we care about the human spirit and enabling human beings around the globe to live the fullest possible lives, we must not ignore it just because we find it difficult to measure the dimensions of either the problem or its solution.

Philanthropy is not a branch of the social sciences, though it may attempt to ameliorate social ills. The philanthropist must understand that not everything is easily measurable and that the correlations of the social scientist do not necessarily lead unproblematically to effective policy. And one would be bound to admit that the social sciences have been notoriously poor at predicting even major catastrophes. Some of their predictions can turn out to be simply wrong. Hence, one cannot always approach philanthropy as if it were a controlled experiment in which one could feed one group of mice a lot and another group a little and then discover which group got fat. John Maynard Keynes, a great social scientist by any measure, put the matter extraordinarily well when he wrote the following: "the statement that Queen Victoria was a better queen but not a happier woman than Queen Elizabeth" is "a proposition not without meaning and not without interest, but unsuitable as material for the differential calculus". The philanthropist must always bear in mind that many of the most important things in human life are not suitable material for the differential calculus.

American culture sometimes contributes to the failure to take this into account. There is no doubt that the United States has a culture of generous philanthropy that exists nowhere else in the world at anything like the same level. That generosity has created and sustained the world's greatest universities, conquered terrible diseases, and much else.

But there is a strongly practical, sometimes shortsighted, and ultimately anti-intellectual streak in this culture as well. This society has often felt compelled to justify major undertakings in terms of their contribution to the Gross Domestic Product or the national defense. But we have by now learned very well that Gross Domestic Product can grow while leaving behind an unconscionable number of poor. And defense spending can grow without any view to what might make the nation most worth defending.

The culture of sports also can have unfortunate effects. The public likes to know who wins and who is ranked number one or in the top ten or top one hundred. This appetite for rankings can produce utterly perverse effects in some areas of endeavor in which philanthropy is important. Higher education may be the most egregious. Many philanthropic dollars have been unwisely spent in the effort to make one or another college or university "more competitive" and thus higher in the rankings of such institutions. It is nonsense to suggest that one could construct a meaningful ranking in the first place. But the criteria according to which institutions rise or fall in such rankings as those of *U. S. News & World Report* have essentially nothing to do with the quality of educational experience that any particular individual is likely to have in any particular institution. For example, the fact that one institution has rejected many more applicants than another guarantees nothing about the experience of the student who enrolls at the one or the other. The fact that one institution is very much wealthier than another and thus is able to spend much more per student than another guarantees nothing in and of itself about whether that wealth is being invested wisely in things that might contribute to a better education. Often the philanthropic dollars that produce the wealth of institutions are invested in ways that pander to the rampant consumerism of our society in general and of very many eighteen-year-olds in particular.

Worst of all is the money spent on intercollegiate athletics. It is sometimes claimed that successful athletic teams generate philanthropy for other purposes. This has been shown not to be true in the main. Yet a good deal of philanthropy in higher education goes to supporting athletics programs in which students of lesser academic

ability are segregated from the intellectual life of their institutions and in the worst of cases graduate at very much lower rates than their fellow students. Participation in athletics can be a valuable part of an undergraduate education, just as playing in the college orchestra or acting in a play can. But the goal cannot be allowed to become rising to number N from number N-*x* simply for its own sake.

Philanthropy must in the end be about values worthy of the name. These are not easily measurable or rankable. And they may not be novel or change much over time. It may not be possible to realise them easily. But failure in the attempt does not necessarily make the attempt unworthwhile. This argues for a philanthropy that resists fashion and the pursuit of novelty for its own sake. The worst thing about much philanthropy in the foundation world especially is that it is fickle.

It is well then to begin by asking not what is the problem to be solved, but what is the phenomenon to be addressed and what are the values to be realised. The answer to this question must predominate over whether the outcome has impact that is easily measured or can be easily assessed. This may entail a willingness to live with ambiguity and what might be thought to be failure in more conventional terms. The fear of failure can stand in the way of noble undertakings. Even more important in this context, however, is that one need not be deterred by a fear that one may never know whether one has succeeded or failed except that one has valued and supported some activity. There is a cost/benefit analysis that is usefully undertaken in this context as well. Efforts at impact and assessment may simply cost too much as a fraction of the total resources being expended. All of us surely believe that certain activities are inherently worthwhile and deserve support even if they cannot be shown to cure ills that might be measured by the tools of social science.

This raises an ethical question. Some problems can be solved and some social ills measurably ameliorated. Given the enormity of the social ills afflicting even the richest country the world has ever known, to say nothing of the developing world, how can one devote resources to activities that do not ameliorate these ills or that may even disproportionately benefit those who must be seen to be privileged by

any reasonable definition?

The logical extreme of the position implied by this question, given that the world's social ills will almost certainly never be entirely cured, would hold that no philanthropic resources whatever should be devoted higher education and cultural institutions except perhaps to the extent that higher education trains people who will work directly on social problems. Such a view surely implies similar constraints on consumption by the well-to-do. How can one devote one's personal resources to anything other than basic necessities in the face of human misery? This points directly to the question of income inequality and income redistribution. Individuals will have widely varying views of this, but nations will arrive at compromises among these individual views and engage in more or less income redistribution for social and other purposes. But every nation — including the most socialist in the world today — and every individual could always do more.

A better approach to the ethical question would start with some attempt to describe the rights of all people, rich and poor alike. Martha Nussbaum describes this (somewhat more expansively than Amartya Sen) in terms of capabilities that every human being is entitled to realise. These capabilities include, of course, good health and nutrition, education, and political freedom. But they also include the capability of thought and imagination and creative work. Seeing the realisation of this capability as a fundamental right provides the framework in which we can advocate the investment of philanthropic resources in cultural institutions and in those aspects of higher education that serve more than a merely instrumental purpose. Although it will not be easy to strike the balance among capabilities in the face of resource constraints, to fail to invest in the realisation, on the part of as many people as possible, of the capability of what we might call the life of the mind and its creative potential is to deprive at least some number of people of a fundamental human right.

Understood in this way, the humanities and the arts are essential to being fully human and are far from being mere entertainment. This is not to say that everyone participating in the arts by attending plays and concerts is deeply engaged in living the life of the mind. And it does

not prevent one from regarding some artistic creation as trash. But simply to arrive at such a critical judgment is itself to exercise the imagination in a way that society should value and promote. In this way, the cultivation of the humanities and arts can be understood to be one of the responsibilities of a society to its people and an essential part of becoming fully human for the individual.

It will be very hard either to prove this or measure it. How would we know that more people are living the life of the mind? Taking college courses in the humanities, attending concerts and plays, and visiting museums do not in and of themselves guarantee it. We are forced to console ourselves with the *belief* that doing these things is better than not doing them and that promoting them is a worthy undertaking.

These activities turn out to be expensive, and this returns us to the question of income redistribution. Absent some commitment on the part of society at large and philanthropy in particular, they will become increasingly the province of the rich. This is a fundamental injustice in the terms I have outlined. The embarrassing fact, however, is that many in the United States at the moment seem fully prepared to deny to a substantial fraction of the population the capability of good health and adequate food and shelter. It should perhaps not be surprising then that these same people are fully prepared to withdraw public support for the humanities and the arts. This leaves the responsibility for the necessary redistribution of income to individual educational and cultural institutions. Each must enable access for the less well-to-do by requesting or simply requiring the more well-to-do to contribute a greater-than-average share of the costs. Philanthropy plays a very big role in this, a role that is favored by the tax code. But placing this responsibility ultimately on thousands of individual educational and cultural organisations is at a minimum a very inefficient method for achieving a result that is crucial to the well-being of the society at large.

Accepting the appropriateness of philanthropic support for the humanities and the arts, how might one think about actually providing it? A foundation that would have this as its principal goal must begin by understanding thoroughly that it only supports money-losing

businesses. If educational and cultural institutions of the kind we have in mind were not by their nature money-losing businesses they would have no need of philanthropy. Market forces have shown clearly that they will not provide the necessary support for such activities.

This is perhaps the hardest thing for some philanthropists and trustees of philanthropies to understand, coming as they sometimes do from the world of for-profit entrepreneurship. Some will say that they do not wish to make donations for the sake of covering deficits. But every philanthropic dollar goes to cover a deficit. The only question is how large a deficit is the institution reasonably prepared to try to cover. Expenses and revenues must of course be brought into balance, and this requires careful planning and estimates of risk (as in any for-profit business). But there is no such thing as saying that the first dollar donated during the fiscal year is not covering a deficit whereas the last one is. Similarly, to say, for example, that an institution ought to live within the means provided by its endowment without reducing its real value is only to say that the institution's deficit should be covered by past donors who created the endowment rather than by present donors.

Another feature of activities such as the humanities and the arts that does not respond well to the culture of the for-profit world as we encounter it today is that they operate on very long time horizons. One might argue that the for-profit world could benefit from operating with longer horizons in view as well. But the pursuit of the humanities and the arts is by its nature timeless and endless. Its methods may change over time, but its goals remain essentially the same, and thus there is no such thing as the quick fix or the quick profit.

This runs headlong into modern's society's unquenchable thirst for novelty and its correspondingly atrophied attention span. Setting aside the mass media and their attitude toward what ought to be conveyed as news to the citizenry, even universities can fall prey to the pursuit of novelty for its own sake. This has a way, without malice necessarily, of privileging the sciences and technology over the humanities and the arts. Science is by its nature about the pursuit of the new. Discovery is its goal — sometimes patentable and revenue producing. Thus, the

university's own communications effort may give a much more prominent place to the sciences than to the humanities and the arts because these are often occupied with ancient concerns even if expressed in new forms. And if we care about undergraduate education, we will find it especially difficult to produce good newspaper copy by current standards.

The big news in undergraduate education on every campus every day ought to be that some large number of undergraduates felt the thrill of grappling with an idea new to them, never mind whether that idea was first expressed in Greece in the 5th century B.C.E. or the day before yesterday. This should not be confused with a wish to have them encounter some fixed body of ideas and works embodying them. The goal is to nurture a hunger for ideas ancient and modern, western and non-Western, and an enduring regret that one will never have read enough or know enough or have exhausted the mind's capacity to stretch. Yet no newspaper will make this the lead story day in and day out.

The lesson for the philanthropist is that if one cares about the humanities and the arts, one cannot reasonably insist on novelty as the primary goal. Nor can one insist that the goal be reached in some near term, after which one is at liberty to direct one's attention elsewhere, perhaps leaving an institution with a financial burden that it may have difficulty sustaining. To promote the humanities and the arts is to promote more than anything a way of life rather than a body of information. As a result, philanthropic supporters of the humanities and the arts must be content to be patient and steadfast and not to have their names on the front page of the newspaper very often.

A frequent debate in philanthropy concerns the difference between support for specific programs in an institution and core support for the underlying costs of the institution's activity. Some foundations are highly allergic to the latter. Here, too, different balances can be struck. But one cannot in good conscience only push institutions to pursue novelty without taking some account of their need to keep the lights on and the reluctance of many donors to help with such mundane needs.

All of this is to suggest that there are extremely valuable and important kinds of philanthropy that do not have novelty as a primary goal and that do not lend themselves to metrics for impact and assessment. Above all, they do not lend themselves to the self-promotion of the philanthropist. They derive from values and belief and commitment, even or especially in the face of forces to the contrary. In the end, it might even be more satisfying to know that one has remained true to one's values and belief and commitment despite demonstrated failure. The likelier case is that one will never know for certain whether one has succeeded. But the fear of failure and an inability to live with ambiguity are as paralysing in philanthropy as they are in any other human activity.

How then to go about being a philanthropist? Modesty is a desirable attribute. This brings me back to my experience of having been "on both sides of the table". I am often asked about the difference. In my own view they have something profound in common. As a university president I always assumed that my job was to listen for other people's good ideas and then try to find the resources with which to help them realise those ideas. As a foundation president I assume that my job is to listen for other people's good ideas and then try to provide the resources with which to help them realise those ideas. This of course assumes in the university context that one picks very good people — people with good ideas and a commitment to collaboration for the common good. The president cannot possibly alone have all of the good ideas that it takes to make a great university. Admitting that is crucial to achieving the necessary collaboration. The foundation president cannot possibly have all of the good ideas either and should not assume the right to tell everyone else how they ought to conduct their affairs. Listening is perhaps the greatest skill of them all.

Although the foundation president can choose the right colleagues, the foundation does not choose its grantees in quite the same way. It requires especially careful listening. In the end, as in most other activities in life, it requires figuring out whom one can trust. And given trust, there needs to be some willingness to gamble. When I hear talk of venture philanthropists and entrepreneurial philanthropists, I often think that we are a lot more like bookies. With some ability to read the

racing form, we go out to the track, and when we spot a good-looking horse, we decided to put two dollars on the nose of that one. Then we can only stand back and see what happens, knowing that if we don't lose once in a while we will never win big either.

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TOWARD A POROUS MEMBRANE: CIVIL SOCIETY AND THE STATE OF SOUTH AFRICA

By Michael Savage

Civil society is an all-embracing term for organisations and activities outside of the state or government spheres. During the apartheid years some of the most important internal initiatives in opposing apartheid and defending the institutions, people, and ideas opposing apartheid came from organisations, institutions and individuals firmly located within civil society. The apartheid government had little hesitation in launching sometimes crippling attacks on many opposing it. Many non-profit organisations (trade unions, churches, civic organisations, legal defence bodies and universities among them) suffered from state incursions in attempts to control core aspects of their activities. An ironic but positive consequence of these attacks was that they often helped to strengthen civil society by making those attacked more focused, more resourceful, and more determined in their opposition to apartheid. It forms a central antithesis of the apartheid regime that it helped throw up bodies addressing inadequacies in apartheid education, health, legal, employment and social policies and by doing so strengthened oppositional politics and activities, thereby helping bring forward its own demise. Then in 1994 came the end of the apartheid state and the establishment of the democratic state, which was accompanied by the state entering into new relationships with what was by then a generally vibrant civil society. But the relationship soon produced a totally different set of tensions between state and civil society. It is this canvas of transition to democracy and the tension surrounding the messy relationship of the state to civil society after the 1994 election that forms the setting for this essay.

The spectacular rise of the United Democratic Front (UDF) in 1983 decisively altered the internal political landscape in the quest for democracy. Its swiftly growing and inclusive broad base, grouped a wide range of varied civil society organisations under one loosely structured 'political umbrella'. The UDF provided space for diverse churches, trade unions, civic associations and many others, who all had a commitment to ending apartheid, to unite in common action and not

to focus on any of their differing ideological positions. The impact of the UDF rippled far out in varied ways into business, political parties, universities, and schools — through its public protests against the apartheid regime in the streets, through its member's involvement in non-UDF bodies, and through the spread of its operational style of consultative decision-making into other bodies. Its impact was considerable in giving a unified voice to those in civil society opposing apartheid. It operated in a richly diverse civil society. One pointer to this is provided in a 1998 study that showed an astounding 98 920 non-profit organisations existed across three major sectors: social services, culture and recreation, and housing and development.

While the majority of non-profit organisations were small, semi-formal, and community based, some fast growing formal bodies had emerged.[1] Dominant among these larger ones were the Urban Foundation, Kagiso Trust, IDASA (the Institute for a Democratic Alternative in South Africa) and the Independent Development Trust (IDT), all of whom to some degree were in tense dialogue with the apartheid state.

One of these, the IDT, provides a good illustration of the mounting pressures on civil society during the transition period. The IDT had been formed in 1990 and subsequently had come to play a significant role in social development, particularly in the areas of supplying housing, schooling, potable water, and assisting in rural economic development. In 1990 the IDT received ZAR 2 billion for its work from the state, derived from the sale of South Africa's hidden reserve oil supply.

The visionary behind the founding of the IDT, retired Judge Jan Steyn, and President FW de Klerk had agreed that no political capital should be made from the transfer by the state of this sum either by the state or the IDT. This agreement held. But after the 1994 election the impact and professionalism of the IDT, as well as the effective ways it

[1] Mark Swilling and Bev Russell, *The size and scope of the non-profit sector in South Africa* (The University of the Witwatersrand Graduate School of Public & Development Management [P&DM] programme, 2002).

distributed its funds, indubitably caused resentment because it overshadowed the development work of others in government, and did not necessarily provide funding to activities and organisations favoured by some African National Congress (ANC) activists. A sorry saga then ensued.

Soon after the 1994 election Deputy President Thabo Mbeki established a small, probably informal group, within the Presidency involving Mojanku Gumbi (his personal lawyer), to consider the role of the IDT. It recommended that that the IDT from 1995 was to become 'an enabler' or 'facilitator' of services to the disadvantaged rather than to be an actual deliverer of these services. Dr. Mamphela Ramphele, the then Chair of IDT, was then given a directive by a senior government figure that this change was to be implemented and if it was not implemented specific legislation would be introduced to reclaim all state monies given to the IDT. She immediately obtained two separate written opinions from Senior Counsel that such legislation would clearly be unconstitutional, as it would involve expropriation without proper compensation. Despite this advice, and as the hard realities of the consequences of the threatened legislation unfolded, in a still unpublicised and unexplained move, the IDT transferred back to the state treasury the sum of ZAR 2 billion. This event provided a disturbingly clear indicator of the state's ability to impose *diktats,* emanating from a small group within it, on civil society organisations.

Over the same period the much vaunted Reconstruction and Development Programme (RDP) was established in May 1994. The Programme was led by Minister Jay Naidoo and was located in the Presidency, with its chief director Dr Bernie Fanaroff. Both Naidoo and Fanaroff bore no animus toward the IDT and saw it as an effective and efficient organisation. Understandably their view was that only those civil society organisations engaged in effective and efficient delivery of change should be considered eligible to receive any foreign donor monies. They then helped establish the National Development Agency (NDA) as the main channel through which civil society could access support for its work. But the NDA was plagued by maladministration and teething problems which prevented it from

providing a flow of funding to organisations that were in dire need of support in order to continue their work, in such areas as education, job creation, health and housing. Many of these organisations had been receiving substantial direct foreign aid which had now been switched into bilateral government-to-government aid agreements. While the NDA was to be a channel for some of this funding, it was failing to deliver with the consequence that important and efficient NGOs, particularly in the area of school education, rapidly went to the wall and closed.

But the work of the RDP itself was soon to be cut short. Over the course of its whole existence, despite repeated efforts, Naidoo and Fanaroff failed to secure any meeting with the then Deputy-President Thabo Mbeki to discuss and report on issues facing the RDP. Some explanation of this is now emerging. Totally unbeknown to Naidoo and Fanaroff, soon after its birth the RDP was under silent attack from within the Presidency. A small group had been formed inside Mbeki's office and was engaged in a series of meetings to construct the new Growth, Employment and Redistribution Strategy (GEAR), which was predicated on the total closure of the RDP programme. On 28 March 1996 Naidoo was called in by President Mandela and told he was being appointed as the Minister of Posts, Telecommunications and Broadcasting, and that the RDP offices were to be closed. His appointment was announced in the House of Assembly that day, as was the closure of the RDP — barely 23 months after it had been established. Not one iota of prior consultation with Naidoo, or with any person involved in leading the RDP, had taken place before its sudden closure was publicly announced.

Naidoo has since documented and reflected on the RDP and these extraordinary events:

> …it was then, in 1994, we made the critical mistake… we demobilised our civil society. And I, as Minister for the RDP, was part of that grave mistake, because in saying our government… would deliver houses, schools, hospitals, clinics jobs and just about everything else the new South Africa desired, our own people became bystanders in the process. And

> that was when the real engine for freedom came to a grinding halt, because the funding for civil society began to dry up as international donors swung their support from very viable civil society organisations to government-led programs. It was one of our biggest mistakes.[2]

The sector already was bleeding, for it was not only funding that was going, so too were some of its most qualified and prominent personnel leaving to take up positions in national, provincial and local government and within state institutions and also elsewhere. This messy transitional period for the relationship between civil society and the state was not made easier at the ANC 1997 national congress in Mafikeng when out-going President Mandela declared (in a speech widely believed to contain in-coming President Mbeki's heavy hand):

> Returning to our own reality we must make the point that our experience of the last three years points to the importance of non-governmental organisations (NGOs) and community based organisations (CBOs) and grass roots-based political organisations in ensuring participation in governance… However we must draw attention to the fact that many of our NGOs are in fact not NGOs, both because they have no popular base and the actuality is that they rely on domestic and foreign governments, rather than the people, for their sustenance.[3]

He went on to criticise 'some NGOs' for corroding the influence of the ANC through playing a 'watchdog' role, he also directly raised 'the possibility' that some of these NGOs acted 'as instruments of foreign governments… to promote external forces' and specifically cited the United States Agency for International Development as being 'the instrument of a foreign government'. These remarks were widely

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[2] Jay Naidoo, "SA today – From freedom to transformation: Deepening the voice of the people", Harold Wolpe memorial lecture (17 November 2010): http://www.wolpetrust.org.za/main.php?include=2&menu=6. Also see Naidoo's autobiography *Fighting for justice* (Johannesburg: Picador Africa, 2010) on the RDP and its closure.

[3] Nelson Mandela: http://www.anc.org.za/show.php?id=3254 .

interpreted as indicating a hostility to NGOs and CBOs and ominously thought to apply particularly to those that had not established a close relationship to the ANC.

The die was being cast away from creating sound productive relationships with the state and ominously toward a strong state-led control of civil society. The vital question was not being answered: How do civil society and the state productively inter-relate?

STANDING BACK

The membrane separating civil society and the state is a necessary one — when there is little separating the two a society is more than likely to be well on the road to some form of autocratic rule, for the state will have penetrated deeply into the remaining organs of civil society. The issue is one of striking the right balance in the relationship between the state and civil society so that those each side of the membrane respect the integrity and independence of the other and can interact easily.

Establishing this balance is seldom easy even in well established democratic societies, where contestations between the state and its citizenry frequently occur along such fault lines as abortion and the right to life, gun control, immigration, and rights in determining the shape of school education.

From the vantage point of a university I watched the porousness of this membrane change in South Africa. In the apartheid state there was a porous membrane separating Afrikaans medium universities from the state, and academics from these universities were far more likely to be appointed to government commissions, to be used as advisors and to intermingle with state officials than were their English speaking counterparts. But all universities had a series of inevitable and intricate ties to the apartheid state, for they derived most of their funding from it, research monies flowed through state created and funded bodies, those having medical schools most frequently had their academic staff appointed on tripartite agreements (state, provincial, and hospital

authorities), some academics were given relatively short periods of unpaid leave of absences to take up state appointments (but the then existing universities pension system acted as a severe discouragement to tenured academics to leave the university to take up any non-university appointments).

Many tensions emerged over the legitimacy of the state to interfere with university autonomy and academic freedom (among such tensions were the failed attempt by the state to impose a racial quota system for student admission in 1983, the tensions over the appointment of some staff, and over the detention and banning of both staff and students, the imposition of the Group Areas legislation to prevent the integration of student residences, and the banning of publications needed for academic purposes).[4]

The membrane between universities was ambiguously porous — with the state frequently violating the legitimate academic sphere, and with some universities strenuously resisting this, and with the porousness varying between Afrikaans and English medium universities.

The 1990-94 transition to democracy had an immediate impact on the universities' relationship to the state. Academic staff became involved in the negotiating process, took part in the multi-party talks leading to the interim constitution and to the first elections, became involved in the reform of state statutory bodies providing research funding, in the running and planning of health services, and some also became directly involved in the running and monitoring of the 1994 elections. The membrane was becoming more positively porous — academic expertise was being called on, and the state was recognising the immediate utility of universities.

The university experience was not dissimilar from that of wider civil society. Then things took a different turn.

[4] See particularly Stuart Saunders, *Vice-Chancellor on a tightrope* (Cape Town: David Philip, 2000).

LOOKING AT THE PRESENT

After the 1994 elections there was a natural, massive re-organisation of the state and civil society. Personnel both from universities and other organisations in civil society left to take up state positions in state bodies and related organs to help lead the transformation to a non-racial future. Civil society was being denuded of many critical voices. The University of the Western Cape, proudly proclaimed to be 'the University of the left' lost many of its academic staff who became Cabinet Ministers, senior government, provincial and local government officials (and leading one of its professors publicly to term it the 'university of the left-overs'). Civil society personnel were appointed to senior state positions, as Director-Generals of government departments, to significant state bodies such as treasury, to municipal, provincial and national government positions.

But all was not well in the state. In a largely unreported 2011 talk at the University of Cape Town's summer school, Dr. Chippy Olver, the former Director-General of the Department of Environmental Affairs and Tourism in the Mandela government, indicated:

> Under the ANC government there have been two complete revolutions in the civil service — then Deputy-President Mbeki pushing out the RDP office, then President Zuma swept out another lot… We are fuelling instability instead of institutional memory. It takes years to build a functioning department in the civil service, but you can wreck it in a week… In some places the state stands squarely in the way of development. In the Eastern Cape, for example, at every turn the government is an obstacle… So first get the basics right — efficiency, effectiveness, integrity and sound government… because politicising it [the civil service] has taken us to hell.[5]

While the sorry tale belongs elsewhere of how corruption and cadre redeployment infected and corroded the civil service and tainted government, the impact of all these trends in the organisation and the

[5] John Mattison, "The developmental state", *City Press* (13 February 2011).

functioning of the civil service has had major ramifications on easy cooperative relationships between civil society and the state. In 1998 an embryonic maths, science and technology programme in schools in the Eastern Cape, funded by the Open Society Foundation for South Africa, was closed and the funding for it was added to a similar programme in the Northern Province. The Foundation had failed to get any traction for the programme mainly due to the difficulties it encountered in interacting co-operatively with the Eastern Cape Department of Education. Other civil society organisations have encountered similar extreme difficulties in permeating the membrane setting them apart from the state and in setting in motion cooperative development work.

So a picture emerges of how a once vibrant civil society that had opposed apartheid in the post-1994 period experienced attacks on some of its key bodies, such as the IDT, and lost important personnel to government and state bodies, had foreign funding disappear into bilateral agreements with the result that many NGOs closed, and had to face large obstacles in attempts to develop co-operative working relationships with the state. On the state side hostile attitudes to civil society emerged, two "complete revolutions in the civil service" took place as it became politicised and inefficiency and ineffectiveness set in, and few efforts are made from within state bodies to reach out to civil society organisations to join in addressing such major national problems as unemployment, a crumbling school system and a lack of sound basic housing.

LOOKING FORWARD

I offer four pointers to a way forward for civil society organisations:

1. THE VOICE OF CIVIL SOCIETY MUST BE EXPRESSED IF IT IS TO BE HEARD. A key phenomenon is fast emerging: a silence from within civil society. Nary a squeak is currently heard from the once prominent South African Council of Churches, the professions have become almost silent, the universities appear mostly quiet on how they relate to the state and to national problems, and the NGO world has become

quiescent too. There are honourable but few exceptions to this trend, among them are the Treatment Action Campaign focusing on HIV and AIDS and the health services, the coalition of organisations opposing the draft Protection of Information Bill, the Equal Education Campaign demanding proper facilities such as libraries and sound buildings for all schools. The voice of civil society though, is fast becoming silent.

Jay Naidoo rightly notes about civil society that "Despite the threats we are facing, we must remember we still have freedom of expression in this country… It is up to us to raise our voices and to make sure we are heard now… We need to find our voices again."[6] The field is full of issues that civil society organisations need to address clearly and to indicate how to move forward on them. The growing silence in civil society is dangerous, and needs active steps to repel it.

2. CO-OPERATIVE PARTNERSHIPS WITH THE STATE ARE POSSIBLE AND NEED DEVELOPING. Despite the inherent difficulties in creating such cooperative partnerships, there are some fine examples of civil society organisations establishing co-operative relationships with state bodies in the delivery of change. I will cite four examples. First, some, although too few, of the fifty Further Education and Training Colleges have established joint programmes with employers to provide skills training for their students; second, there has been a direct devolution of state funds for bursaries at tertiary institutions to students identified and selected by 'Rural Education Advancement Programme' (REAP); third, the provincial authorities of KwaZulu Natal have provided guarantees of bursary support to students identified for medical training by the Uthombo Youth Development Fund as it recognises that the Fund's selection processes in identifying students from impoverished rural communities, and its mentoring and programme structure have lead to high academic success rates and high retention rates of trained students in rural areas; and finally, the Small Projects Foundation in East London receives direct financial support from the

[6] Jay Naidoo, "SA today – From freedom to transformation: Deepening the voice of the people", Harold Wolpe memorial lecture (17 November 2010): http://www.wolpetrust.org.za/main.php?include=2&menu=6.

Eastern Cape government to cover the training costs of its Village Health Workers programme. None of these examples of cooperative action with state or provincial bodies had an easy birth, but they provide firm pointers to the possibility of creating successful partnerships. While some cooperative actions are almost stillborn (particularly those centred on Sector Educational and Training Authorities), others draw from the embers of a once vibrant civil society to create new, innovative relationships with the state. Such co-operation can extend far beyond being financial and into agreements about employment of NGO trained students in state bodies, or the use of educational material prepared by universities and NGOs in schools.

3. CIVIL SOCIETY MUST STIMULATE AND ASSIST IN THE GROWTH OF ORGANISED COMMUNITIES. The communities of various types can be identified — the scholarly community, the school education community, local communities engaged in actions to improve facilities (service delivery, crime prevention or employment), communities of local youth, communities of the elderly, of those with special needs are but a few among them. It is from communities that leaders emerge who can articulate clear demands and identify how to put words into deeds, and it is organised communities that have a particular strengthening impact on civil society.

4. SMART CIVIL SOCIETY ACTIONS REQUIRE SMART ORGANISATIONS THAT ARE ADAPTIVE AND REFLECTIVE. On the ground there are many exemplary actions centred in civil society that are able to be replicated, reorganised, and built upon. The Impumelelo Social Innovations Centre has a bank of valuable and hard details about such projects that stretch across the areas of education, skills training, water supply, housing, health and environmental management.[7] Institutional knowledge exists about successful academic and school programmes and is embedded in many universities and schools and also needs to be spread (such as the Mellon Foundation is in the process of doing across several South African universities).

[7] See the Impumelelo website www.impumelelo.org for details of such organisations.

Civil society organisations must also develop their own critical monitoring and evaluation procedures. Some organisations create a new 'dependency complex' through providing the unemployed with skills training that does not connect to the labour market, others do not monitor the quality, or control the unit costs of their outputs, and others support unsustainable 'community activities'. An equal obligation exists for both civil society and the state to have efficient and cost effective delivery systems.

Much work awaits to be filled out and nuanced on the canvas that this contribution has sketched upon, and many NGOs and others need to 'tell their stories' to broaden this picture, and fill it with detail, if the relationship of the state and civil society is to be understood and lead to positive actions.

But what this essay points to are the dangers of a leviathan and hegemonic state emerging in South Africa and violating the universally true proposition that a vibrant civil society is a critical element of a successful democracy.

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PERSONAL REFLECTIONS ON FIFTY YEARS OF DIGITAL REVOLUTION

By David Potter

Nearly fifty years ago as a foreign student at Cambridge I wrote a weekly sea-mail letter to my mother in Africa. Many weeks afterwards a reply came. Later as a postgraduate, research required long hours of copying papers in old libraries. And my thesis was written by long-hand and later typewriter. Written information flowed at the pace of physical transport. In South Africa there was no television and a mere two or three state-controlled radio stations. Opinion and news were furnished by a few national newspapers.

Fifty years on, information and ideas travel across the globe in milliseconds. We are linked by the net, perhaps the most transforming infrastructure created by humans. Much economic activity including communications, service functions, logistics and manufacturing has been automated by digital technology. Great libraries of accessible, structured data and knowledge are immediately available. Almost every device and machine whether in the home or office has been automated with new human interfaces. The price of goods across the world has declined progressively over the last twenty years. We are swamped by news, instant opinion, images and public relations that cater to the popular view.

This is the information revolution. It has transformed the world in my adult life. In its economic, social and political impact it stands in the modern era alongside the agrarian and industrial revolutions as the third great transformation wrought by science and technology.

The change has occurred as in a long train journey from coast through mountains to the Highveld. Over short periods, the scenery through the carriage window looks much the same. It changes only slowly and incrementally in time. It is the sum of many small transitions that suddenly brings a quite different view. In the advance of technology, communications and computers, so many dramatic and progressive changes have been implemented that only by stepping back can we see

how the landscape of our lives has been transformed. That will be the job of historians to write. My life as academic, entrepreneur and policy contributor has been lived in the locus of the digital revolution and this essay reflects a personal perspective through that journey. But my wider goal here is to illustrate the scale of change in how we conduct our working and social lives and in how our economy and society have altered.

How did this happen? What was the science? How was the technology created? And how was economic value delivered commercially? How have these changes affected the way we think, the public discourse and the relationships between social classes on the one hand, or nations on the other?

THE SCIENCE

Politicians and policy makers make little distinction between science and technology. A widespread policy approach is to feed money into the science hopper in the belief that technology and new enterprise will flow out the other side. There is nothing linear in the path from scientific discovery to economic benefit. That path is osmotic, empirical and uncharted. The South African-born President of The Royal Society, Aaron Klug (the surname means 'clever' in Yiddish), expressed it well in his valedictory address to The Society in 2001. Progress in science is driven by individual curiosity. We humour and encourage curiosity in children. For most adults however the need is to work co-operatively in delivering the many demands of our society such as the provision of sustenance, clothing, entertainment, housing or healthcare. Good science cannot deliver known goals, but trying to answer good questions, though often fruitless, sometimes opens new understanding. The scientific path is unknown; technology in contrast is goal-oriented. The information revolution is the clearest example of this.

More than two thousand years ago, Greek philosophers had asked whether matter was infinitely divisible. By the end of the 19th century classical physics showed that there was a finite limit; compounds could be separated into elements and the smallest part of an element was

called an atom (from the Greek, meaning un-cuttable). But in 1899 J. J. Thompson, while studying cathode rays, discovered a much smaller negatively charged particle which he called an electron. Atoms could be stripped of an electron leaving a positively charged atom. Ernest Rutherford, Professor of Physics at Manchester University, asked a wonderful question. Were atoms dense like billiard balls or did they have structure? In a brilliantly conceived experiment he examined the scattering of electron-stripped helium atoms through a thin gold foil. Rutherford's experiment reported in 1911 showed that the atoms of gold had a heavy positively charged core surrounded by negatively charged electrons — a planetary model of the atom.

The Rutherford observations raised a further major problem. According to the classical physics of the time, a small negatively charged electron orbiting a heavy positive nucleus should radiate away its energy and collapse into the nucleus. Earlier in 1899, Max Planck had suggested that not only were atoms indivisible, but the transfer of energy was lumpy or quantised at the atomic level. In 1913, Niels Bohr, following Planck and Rutherford, suggested that if there were certain quantised, or discrete, allowable, energy levels of the electron in the atom, energy could not be released from the electron and a stable planetary-like atom could exist. This 'Rutherford Bohr' model marked the start of quantum physics and our early understanding of the structure of atoms. By the 1920s, a proper axiomatic formulation of the subject and theory had been developed by the German theoreticians, Schrodinger and Heisenberg.

As science began to understand the structure of atoms with its new quantum theory, thought turned, inter alia, to the structure of molecules and to solid matter. The first of these fields led eventually to biochemistry, the genome and our developing understanding of life and micro-physiology. The second led to our understanding of the behaviour and properties of solids, conductors and semi-conductors and eventually created great new technologies.

The understanding of both the structure of molecules and solids were advanced by the discovery of X-ray crystallography. X-rays are part of the electromagnetic spectrum with wavelengths that are typically simi-

lar in scale to the separation of atoms in molecules or solids. A beam of X-rays targeted at a crystal will therefore interfere co-operatively with a regular lattice of atoms in a crystal. This phenomenon was observed by Sir William Bragg and Bragg's law of X-ray diffraction was published in 1912 with his son, Sir William Lawrence Bragg. Diffraction showed that solid matter was structured in regular lattices or arrays of atoms.

The new understanding of crystals and the electronic structure of atoms began to explain the behaviour of solids. What we called metals were solids made of atoms that had outer loosely-tied electrons. These 'nearly-free electrons' could move easily within the lattice providing conduction. In quantum terms, 'free electrons' were nearly unbounded across the crystal and therefore formed a near continuous band of energies. In contrast the widely separated energy levels of the deeper electrons in atoms or those of insulators tied electrons locally and disallowed conduction.

Felix Bloch, a student of Heisenberg used the new quantum mechanics to establish 'the band theory of metals'. Together with Enrico Fermi and others the band theory of conduction provided a beautiful explanation for the existence of insulators, conductors and their characteristics. This was science in all its majesty answering the question why.

THE TECHNOLOGY

1931: The year of Stuart's birth; the year that A. H. Wilson first published a paper on the possibility of semi-conductors. Wilson proposed that the doping of an insulator crystal such as silicon or germanium with a small even distribution of metallic atoms with nearly free electrons in their outer band would allow properties of 'semi-conduction' in the resulting crystal. Semi-conductors could be created by a small excess of electrons, or by the opposite effect of a sparsity of negatively charged ions that permitted 'holes' equally capable of transporting charge and energy. These were two different types of semiconductors called 'p' and 'n'. The development of digital electronics moved from the laboratories of universities to those of commercial firms. Foremost

among these were the Bell Laboratories of the giant telephone company AT&T, Texas Instruments and Motorola, the wireless radio company. The possibility of semiconductors stimulated commercial interest through the idea of replacing large and unwieldy thermionic valves with small semiconductor valves or transistors. In 1953, the Bell Laboratories created the first transistor.

The beauty of the transistor was its small scale, ruggedness, low power and potentially very low cost. But more importantly, multiple transistors could be engineered within single crystals to create integrated logic circuits. Over subsequent decades, solid state engineers learnt how to fabricate larger and larger circuits on smaller and smaller scales that provided sophisticated memory and logic circuits.

The capital cost of fabricating logic and memory circuits was large and commercial benefit was unclear. When we examine the path from science through technology to economic benefit, we may often observe that a critical barrier is reached. Markets evolve empirically; but if the cost of the first commercial steps is excessive, how is a virtuous market cycle started? Some large external factor or agent must drive the necessary expenditure. And in the history of the digital revolution, that agency was the United States Department of Defence. This was in the era of what Eisenhower referred to as the 'military industrial complex'. The United States Department of Defence had particular interest in computer-controlled missiles for which semi-conductor circuits were essential. The rich funding of military interest drove the development of the new technology in the United States. America got its guidance system for missiles; but more serendipitously it came to dominate the young semi-conductor industry that grew to be a giant.

The first dedicated semi-conductor company was Fairchild. With growing commercial application, Fairchild prospered and spawned many new semiconductor companies, the most famous of which was Intel. Gordon Moore an alumnus of Fairchild and one of the founders of Intel identified the opportunity. He observed that semiconductors had the potential to double in size and halve in cost every eighteen months for decades ahead. This meant capacity would multiply one million times if progress continued for thirty years. The extraordinary

new technology had the potential to change the world and it did. We shall see the effect of one million again and again in the following evolution of the technology. Has there even been a technology that multiplied capacities a million times in a few decades?

The technology of solid state engineering that derived from the new quantum physics was not constrained to integrated circuits, logic devices and memory. A great range of applications evolved including the solid state laser, the fibre optic cable, light emitting diodes, liquid crystal displays and rotating memory magnetic and optical disk storage. These technologies had the potential to transform communications, bandwidth, memory-storage and display technology.

A million times expansion of capacity: as the engineering pursued the possibilities of Moore's Law, the sheer scale of multiplication has been breathtaking. In 1980, a single memory circuit could support eight thousand bytes or characters of information. Today an equivalent memory circuit can store sixteen billion characters of information in a smaller package and with lower power. That is a multiplication in capacity of two million times in the space of thirty years close to Moore's prediction. Similar scales of capacity expansion have occurred in displays for television and computer screens and in the bandwidth of communications. And equally with the expansion of capacity, economic benefit through market forces has driven larger and larger volumes at lower and lower cost. The result is the ubiquity of the new technology.

APPLICATION

While the science was incubated through curiosity, the technology evolved initially at the intersection of government and companies engaged in the military industrial complex. The science was created in Europe; the technology in the United States. The earliest applications were missile guidance systems and military field communications (the forerunner of the cell-phone) in the United States funded by the arms race during the cold war. Human advances often seem empirical in their genesis. It is a wry observation that happily to date, nuclear mis-

siles have never been deployed. But their creation spawned the early technology that drove the digital world. This is an example, common in history, of the osmotic, empirical and Darwinian evolution of technology from science. The first applications in wider commercial markets were the transistor radio and calculator.

It was the creation of the microprocessor in the early 70s that began to spawn ever-widening utility. In Albuquerque a kit microcomputer was launched called the "Aim" and it attracted Harvard drop-outs, Bill Gates and Paul Allen, to New Mexico to implement a programming language called Basic and found Microsoft. A family of microcomputers began to evolve with a common microprocessor, the 8080, and a common operating system created by a small company called Digital Research. In contrast Motorola produced a microprocessor called the 6800, and later the 6502, chosen by Steve Jobs and Steve Wozniak in developing the Apple II. These early products from funky new companies sold to hobbyists, software specialists and eventually consumers and small businesses. At this new frontier only radical visionaries engaged. A senior executive in the mainframe industry of the time said to me: "Given your academic credentials, what are you doing playing with these toys?" Since IBM was the standard in commercial computers, the introduction of the PC using Intel and Microsoft standards sanctified the microcomputer for business everywhere. In less than a decade, the office across the world was transformed with word-processor, spreadsheet, database, record-keeping and accountancy software. Belatedly IBM recognised the threat to its traditional main-frame and minicomputer businesses. Conventional thinking among the 'suits' of IBM let the new technology slip to others and the standards belonged to the visionaries. Within eight years, IBM was in great difficulty and had to reinvent itself as a services company.

The benefit of computers in the office was multiplied by linking them through local area networks. Work, information and databases could all be shared through the office network. But what if these networks could be shared remotely across different offices? Funded by military spending at the Advanced Research Projects Agency (ARPA), computer scientists, J. C. R. Licklider, Ivan Sutherland and Bob Taylor devised a radical new approach to a network that used packets of data

like letters in the post to facilitate the robust requirements of extensive wide area networks. The first implementation was in 1969.

They called it Arpanet; it used standard protocols and was structured like a spider's web with multiple servers that could deal with the failure of parts, while the whole continued. From an early stage scientists began to use this Arpanet infrastructure to communicate and later the commercial world began to roll out the same standard. The Internet was born. The first application was email and soon financial and commercial databases were being accessed in time critical missions.

The World Wide Web overlaid on the Internet was devised by Timothy Berners-Lee in 1991 at CERN (an institute for collaboration on high energy physics). It expanded the Internet beyond communications to create accessible libraries of knowledge in every field of interest.

In parallel with the transformation of the office and the home, digital technology was to change our mobile lives. Early in the microcomputer evolution, portable computers were created and Psion introduced the first personal digital assistant and palm-top computer in 1984. At the same time, with its experience in military field communications, Motorola began to market car-phones that could maintain connection while moving through a network of wireless cells. As digital solid-state engineering worked its magic on size, cost and power, the car-phone and the PDA merged and created the largest technology market in the world that brought four billion people in touch with each other.

The digital solid-state engineering of the last sixty years has penetrated almost every aspect of life. Most importantly it automated not just the office but the factory. Manufacturing processes were automated by high speed machines that were microprocessor and software controlled and could be applied to almost any manufactured goods: cars, computers, cell-phones, clothing, books, plates, bottles, pharmaceuticals. The labour of man had been reduced ultimately to tending the machines that manufacture our needs. The cost of goods has plummeted over the last twenty years due to the automation of manufacture and less to the addition of new sources of cheap labour.

When I write to my children today in another continent, I send my letter by email and they might access it within seconds or minutes. This is a new universe compared to communications with my mother nearly fifty years ago. And so it is in all forms of communication and media. The worlds of newspapers, magazines, television and radio are transformed with multiple media and, because of falling cost, multiple channels. Everyone has immediate access to news, opinion and spectacle.

Supporting the scale of this communication explosion is the fibre optic cable, again fashioned out of the new solid-state engineering. From the British Navy laying telegraph cables across the world in the nineteenth century, the bandwidth afforded by today's fibre-optic network encompassing the world is billion-folds larger.

And in this wide view of the effect of the digital transformation it is worth ending on the most recent impact on our lives: the engineering marvel of the giant Liquid Crystal Display television screens sold today. With diligent patience over thirty years, Japanese and Korean engineers and companies learnt how to manufacture forty-inch screens with ten million multiplexed components, working in perfect harmony and meeting the requirements of a mass market. Again a million times expansion over thirty years. There is more to come.

THE ECONOMIC IMPACT

It is no exaggeration to say that going digital has transformed all the different spaces of our lives. To the present time, industry production figures suggest that some thirty-five billion microprocessors are now operating in the world. Rather more than half of these are embedded as controllers in almost every device we rely on. Today's motor car has typically thirty or more. So do the fire and security systems that protect us. We pay for products and services with credit cards interrogated by microprocessor terminals. Washing machines, ovens, traffic lights and laser scanners are all controlled by digital technology. In health care, microprocessor-driven tomography has expanded medical diagnostics dramatically over the last twenty years.

But what has been the wider effect on economy, on our social compacts and on the political culture?

For mankind as a whole, a key transformation has been the roll-out of personal communications, courtesy of the cell-phone over the last twenty years. Today it is not only the developed world that has a personal phone, but most of the world. Cell-phones simply allowed telephone access to rural areas, villages and towns that had never had the benefit of land-lines and exchanges. A country like South Africa now has a penetration of 70% of the population. There are some four billion cell-phones in the world providing direct contact for most people irrespective of rich or poor circumstance. The benefit in personal, social and commercial terms is immense.

Satellite TV, the Internet and Web add public information to personal communications. And universal access to shared media contributes elements of a global culture in sport, film, products, services and perhaps shared values.

The effect on the structure of the world economy is less transparent but more profound. This is true of financial markets, manufacturing, engineering, ordering, logistics, retailing and service functions. Economic history identifies increasing human specialisation as a core driver of progress. Alternatively it might be that technology provides greater productivity that in turn frees humans to specialise further. Such specialisations require the linkage of trade, communications and co-operation between the groups that create a value chain. The early hunter who stayed in the village to work leather and provide clothing is an example. But he would need to barter or trade his goods in return for food. Today's world of business is built on great specialisations and long, complex value chains. Going digital has turned the value chain from local to global.

Designed in California; made in China, 21st century businesses segment their activities in different regions, countries or provinces; each link is located wherever comparative advantage is optimised. Call centres are located in unemployed north Scotland, Bangalore or South Africa. Manufacturing is sited at the fulcrum of component specialisations.

Research is located near universities and educated workforces. This is true of the large or small company so that the corporation is trans-national and no longer belongs to a particular country. Nations must compete to attract activity on the basis of tax, investment support, the provision of infrastructure or an educated populace.

The global value chain is enabled by communications, band-width and the automation of information in the business. Digital technology has allowed businesses to structure, capture, store and access the organisation's information covering the management of inventory, order-capture and fulfilment, global logistics in the transport of goods, and automated machine-based manufacturing.

Going digital has changed manufacturing more than any other activity. We do not see the process as we see cell-phones or credit card payments, but the effects on productivity and the falling cost of goods are everywhere. The great assembly lines, immortalised by Charlie Chaplin's *Modern Times*, are gone. People have been replaced in the repetitive tasks of mass manufacture by programmable microprocessor-controlled machines that can integrate a hundred components in thirty seconds. These advances are seen in the macro-economic data of the last twenty years. Over much of the world and particularly in the large consuming developed-countries, the progressive deflation in the price of goods has been a major feature. It is not the policies of central bankers that have driven this deflation. It is partly the expansion of low-cost labour with the new value-chains that business can use, but beyond any of these it is the automation of manufacture. The first industrial revolution was driven by power and the machine. The second has been driven by digital automation. As a side note, inflation in North America and Europe has been low and stable for twenty years. In these countries about half of the consumption basket is filled with goods and about half with services. The inflation index has been low with inflation of services high and goods negative, allowing a temporary, halcyon period for these countries.

Finally we cannot ignore the effect on the financial world and the impact for good or ill on the world economy. Financial intermediation

and capital markets are driven by information and they were among the first to begin to use digital technology. Today the sheer volume and speed of transactions in both real and derivative markets is awesome. Hundreds of trillions of dollars are transacted through the foreign exchange markets each year. And there has been a multiplication of instruments of Byzantine complexity through securitisation and forward contracts. The economy of products and services deals with present value but capital markets deal with future value in tomorrow's unknown virtual world. We see the lunacy of the talking heads in front of the flashing tickers of financial markets, shown on Bloomberg or CNBC and wonder at its benefit. The complexity created by this world outstripped the capacity of economists, governments and regulators to comprehend it. While there were wide benefits in facilitating the expansion of credit and finance, the age-old problem of human herding and greed supercharged by the digital capacity of financial markets led to the Great Financial Crash in 2007-09.

Going digital has wrought great benefit across the world by facilitating the global economy. This has brought increasing millions of the people of the world into the modern economy and shared economic benefit across growing numbers of previously dispossessed countries. Nowhere is this truer than in China and Asia. It is an irony that while the new emerging world focuses on real economic activity in goods and services, the Anglosphere of America and Britain particularly has eschewed manufacturing and focused on the virtual world of capital markets. The result has been the North Atlantic Crash while economic power shifts irreversibly to Asia.

MEDIA, SOCIAL AND POLITICAL IMPACT

Economic change inevitably changes the social and political context. Overlaid, is the impact of the rapidly changing world of media. Newspapers and broadcast are fundamentally information purveyors and both have seen the automation of their production and distribution reinvented by the new technology. The cost of production of newspapers fell as the manufacture of the daily newspaper and its distribution were automated. Editorial condensed as the key cost. Broadcast went

digital and added new forms of delivery such as multiple satellite channels. Radio channels proliferated and the Internet provided a new giant real-time competitor. Suppliers of media and with it news, opinion and entertainment have experienced an unprecedented expansion of competition. They respond today by pursuing populism and ephemera. The moving image has replaced the written word with a reduction in the attention span. The result is a celebratory culture, footballers attracting extraordinary cash flows, and politicians making policy in the public gaze of their electors.

More generally the portability of digital information destroys its security for the individual, for private organisations and for governments. Privacy is dead. Governments monitor internet and cell-phone traffic. Whistleblowers with a small memory stick or communications can transfer state secrets to public websites or bank customer data to newspapers and the state. Security cameras watch our moves in all parts of the city.

The Internet and social media provide new conversations among large interest groups, fomenting political action through strikes or revolutions. Dispossessed people living under autocratic rule see daily the basic human rights and conditions enjoyed by other more fortunate nations and classes. We have seen this in Tunisia, Egypt, and Libya. We have seen the corruption of politicians exposed, and authorities embarrassed through agents such as Wikileaks.

The consequence is a new narrative for the conduct of politics. To those of an ultra liberal mind, there is only virtue in the freeing of so much information, public and private. But does the new narrative exclude private and considered debate for cabinets and boardrooms? Do the demands of continuous popular gaze force politicians to pursue the lowest common denominator and eschew careful thought and policy making?

In contrast, social networks drive and facilitate new communities. The Web gives instant access to great libraries of information. Research and learning has been transformed with instant access, great

capacity, browsing and search facilities undreamt of twenty years ago. Going digital has changed the world.

DAVID POTTER, academic, entrepreneur, policy-maker and philanthropist. Born in South Africa, he studied for the natural science tripos at Cambridge. After teaching physics at London University, he left at the start of the digital revolution to found Psion Computers, which led the way in creating the world's first hand-held computers. He has served on the Council of Science and Technology, the Dearing Committee on Higher Education and the Court of The Bank of England. David and Elaine Potter created the Potter Scholarships at the University of Cape Town, South Africa.

LOCAL HEROES

By Carolyn Makinson

In recent years, Muslim men have received rather unfavourable "press". Yet, in my travels, I have met many Muslim men who loved dearly their wives, daughters, mothers, and sisters and who strove to demonstrate their love where there were few opportunities for the public expression of tenderness. These are stories of my encounters with several such men, and of another "local hero" who lives in Rwanda. As I write these stories, earth-shattering events have broken out across the Middle East. I hope that the people of the Middle East — especially the women — will soon know greater freedom, and that we shall come to know them with greater nuance and empathy.

THE FAMILY PLANNING CORNER

My first encounter with Afghans was in Peshawar in 2000 in a camp for Afghan refugees. Several years earlier, a dear friend, Mary Anne Schwalbe, had introduced me to the world of refugees and to the appalling conditions in which many of them lived for years at a time. She told me that refugee women around the world had little help with childbirth and lacked access to family planning and other services necessary to safeguard their health. Mary Anne conducted the first field research documenting this tremendous neglect of refugee women's health. In 1995, one of the sites she visited was the Peshawar camp. Five years later, we returned together to see what, if anything, had changed. Imagine our surprise and delight when the first program we saw was the "Family Planning Corner". We were greeted by Dr. Tila, who ran the health clinic, by a nurse midwife, and by smiling Afghan women clients.

As we emerged from the clinic to visit another women's program, a group of men in traditional Afghan pakools rushed down stone steps from a nearby building. They waved their arms and called out, trying to catch our attention. But we were swept off to see a women's handicraft project. Somewhat dejectedly, they remounted the steps and went back

inside their building. Twenty minutes later, as we left handicrafts, we were again accosted by the men who seemed very eager indeed to speak with us. To their chagrin (and somewhat to our relief), we were swept off to see a women's health education program. This was to be the final stop in our whirlwind tour. As we emerged, our van drew up ready to take us out of the camp. The men made one last valiant attempt. It occurred to me that maybe they were not in favour of family planning — that maybe they thought Mary Anne and I (grey-haired, 5' 2" and 120lbs apiece) were a Trojan horse intent on destroying the harmony of Afghan family life. However, it seemed rather cowardly of us to climb into our van and disappear. Somewhat apprehensively, we followed them up the steps and into their building.

We sat on cushions on the floor and waited for the men to speak. It turned out that they were a men's health group. All they wanted was the chance to tell us how much they cared about the health of their wives, sisters and daughters, and how important they knew the new health services were for women. They understood the dangers of childbirth, of having too many children, and of having them too young or too closely together. They wanted to thank us for our role in bringing these services to their camp. We said our goodbyes and headed back to our van happy, tearful and a little sheepish about our own preconceptions.

THE WIFE INDOORS

From the camp for Afghan refugees in Peshawar, we travelled to Afghanistan itself. This was during the days of Taliban rule when life was especially oppressive for women. In Kabul, the few women we saw wore the all-enveloping burqua. In the countryside, away from the capital, life seemed a little more relaxed. But women covered their faces and turned away as our group approached.

The International Rescue Committee worked in Afghanistan throughout this period, bringing small-scale livelihood projects to villagers in rural areas. We visited schools and agricultural projects. The Afghans we met were warm and engaging but women were all but invisible in public life.

One morning, I was taken to meet an Afghan man who was influential in his community. The driver and I arrived at his home — a shabby walled compound in a desolate landscape, like most homes in the area we visited. We knocked at a large wooden door and waited for a few minutes until the householder arrived. He showed us into a farmyard, chickens scurrying away as we approached. We chatted about the IRC's projects in his community, the driver acting as interpreter. As we rose to take our leave, the man spoke animatedly to the driver. He wanted me to meet his wife who was indoors — she could not venture into the courtyard while a male stranger was present. It would mean so much to her to meet a woman like me from America.

The husband and the driver continued to talk back and forth. Eventually, the driver explained the problem. How were the wife and I to speak to each other since she spoke no English and I spoke no Pashto? The driver was the only person who spoke both languages. Yet, as a man and a stranger to the family, it was impossible for him to meet the wife indoors and act as interpreter. The driver left to see if something could be done — maybe he could find a woman who might act as interpreter. I stayed in the courtyard with the husband and the chickens and, before long, the driver returned — inevitably — with no solution to the problem. We again prepared to take our leave from the husband. But he could not let us go. He could not tell his wife that I had visited and gone away without seeing her.

Eventually, we thought of the obvious: I would go inside and simply sit with his wife. I was taken into a bare mud-brick room, with a small window onto the farmyard high up in one wall, and cushions and rugs on the floor. The husband beamed as he introduced me to his wife who was in her thirties — shy, beautiful and excited. The husband left us and we sat on the cushions together, holding hands and speaking, each in our own language. It seemed so simple and so obvious — of course we could communicate the essential.

Years later, I still remember holding hands with the wife and her shy pleasure in meeting me. But, most vividly, I remember the persistence of the husband who loved his wife and could not bear to disappoint her.

THE NEW WASHING MACHINE

During the mid 1980s, I rented a room from an Egyptian widow in Cairo and eventually became a member of her family for over a year. It was the most interesting year of my life — like suddenly being reborn as someone completely different. A few months after I moved in, my Egyptian "mother", Kuka, announced that her son was returning from Paris to live in Cairo, together with his new wife and his two young sons from his first marriage. Life was about to become very interesting indeed.

Hitherto, Kuka and I had accomplished the weekly laundry in the bathtub, hanging the wet washing to dry on a balcony overlooking the Pyramids. We were now to be propelled into the 20th century. One Saturday morning, while I was studying, Kuka came into my room to announce that a washing machine would be delivered later that day and installed in the family bathroom, which adjoined my bedroom. A very large cardboard box soon arrived and Mohammed, the 'mohandis' who lived in the flat below, was summoned. Mohandis is the Arabic word for engineer. In our world, Mohammed's talent with machinery was legendary.

Mohammed laboured in the bathroom for quite some time. Eventually, the entire family was summoned to watch the machine's maiden voyage. A large quantity of clothing was stuffed into its opening, the 'on' button was pressed, and the family disappeared to the sitting room for tea and pastries — the usual way of recognising events of significance.

All seemed well from my next-door bedroom. There were the familiar sounds of water sloshing around and the machine's drum stopping every so often to reverse direction. I thought happily how much easier laundry day was going to be now that Kuka and I would no longer have to spend a couple of hours bent over the bathtub. Until the spin cycle. Suddenly, I heard an appalling banging and crashing noise coming from the bathroom. I dashed in to find the washing machine running around the room, vibrating so strongly that I thought it might explode. I tried to physically hang onto the machine but received an

electric shock, so thought better of that approach. After a couple of minutes, I simply flipped the electric switch in the wall and went to the sitting room to report.

For the next week, we reverted to the usual bathtub routine for the laundry. At the week-end, Mohammed the mohandis reappeared. The washing machine was placed on a special wooden plinth to prevent it from running around the bathroom, the electricity supply was earthed, clothes were loaded, and everyone disappeared again for tea and pastries. This time, I was on high alert waiting for the spin cycle. The most dreadful noises again emanated from the bathroom. Admittedly, the machine remained stationary on its plinth and I could touch it without being shocked. But it was clear that not all was well. I turned it off at the wall socket and again went to interrupt the tea and cakes.

That evening, I decided to read the washing machine manual. It was the first time in my life I had ever contemplated reading such a thing. At school, I had been removed from science classes long before we got to anything practical like electricity or machinery. The one thing I had going for me was that the manual was written in English — and helpfully translated into Japanese, German, French and Spanish — but not into Arabic. After a couple of pages, I came across the ominous phrase "transit bolts". It was essential to remove these bolts when the machine was installed. Should they not be removed, the machine would destroy itself when it reached the spin cycle.

I thought it would be a relatively simple matter for me to explain the transit bolts to Mohamed the mohandis, who was one of the most gentle and amenable men I had ever met. This plan, however, was scotched by Kuka who felt the mohandis's self esteem was more important than the washing machine. It was out of the question for a woman to tell the mohandis how to do his job. The machine could just be trashed and Mona, the daughter-in-law, could help do the laundry in the bathtub. It occurred to me that Kuka had mixed feelings about the new machine. If the bathtub had been good enough for her for all these years, why wasn't it good enough for Mona, the new daughter-in-law? At this point, however, I myself had a strong vested interest in making sure the washing machine was up and running. I was also

unsure of the impact on my bedroom of a washing machine explosion, not to mention the impact on family harmony.

It was clear that I needed a man who read English and spoke Arabic. One such relative existed — Assaam, a wealthy and worldly businessman married to Kuka's daughter. I called Assaam on the telephone, explained the problem in English and assumed that neither Kuka nor the mohandis would be any the wiser. Sure enough, Assaam soon came to visit and to advise on the washing machine. Initially, the family were somewhat mystified by this turn of events, since Assam's practical skills had never before been much in evidence — even the changing of a light bulb in his home required a visit from the local handyman. Still, a washing machine was different from a light bulb, requiring sophisticated knowledge of computers and electronics — no wonder Assaam would be able to help.

Assaam and the mohandis pored over the manual and disappeared into the bathroom. Later, I drifted past the bathroom — trying not to look too interested — and saw them huddled together on the floor with nuts, bolts and washing machine parts arrayed around the room. After about 20 minutes, they emerged to say that, between them, they had figured out the problem. The washing machine was set to go. The women of the family gathered in the bathroom, laughing and celebrating the success of the project with the traditional Egyptian zagreet. They then disappeared for more tea and cakes.

Later that afternoon, with the laundry happily rotating in the washing machine, I went to sit with Mohamed the mohandis as he smoked his favorite shisha and celebrated the success of the washing machine project. He took a few puffs then smiled at me mischievously. "So, mohandissa Carolyn, what do you think?" And this was how he addressed me for the rest of my stay in Cairo.

THE FOURTH SUITOR

Eventually, I left behind the world of washing machines and went to live in a rural village in the Delta for a few months. There I was 'adopted' by Fatima and her family. I visited them every day and learnt

about rural Egyptian life — caring for the cattle and the water buffalo, tending the vegetable garden, sharing the house with the family goat who one day scoffed all the bamiyya intended for the evening's supper, and participating in the rituals surrounding births, deaths, engagements and marriages.

Fatima was by far the most beautiful girl in the village. She was dark-haired, dark-eyed, with a dazzling smile and a lively personality. Her father treasured her, valued her opinion, and entrusted her with the household's most important papers. But Fatima was 19 years old — it was time to get married. Fatima herself looked forward to marriage. She was already laying away the clothes and household goods that would constitute her trousseau. She was happy for her parents to find a groom for her. But she also hoped that he would be a modern husband — young, handsome, someone returning from work in the Gulf.

One morning, I arrived at the house to find the family in a state of excitement. That evening, a relative of Fatima's father was coming to visit, accompanied by her son who was a potential bridegroom for Fatima. Fatima and I discussed what clothes she should wear, and she explained that she would serve tea and be allowed to spend a few minutes with the suitor to gain a first impression. I was still at the house when the visitors arrived. I must admit that I thought the suitor somewhat overweight and unprepossessing for the gorgeous Fatima. But I kept my counsel and left for home.

The following morning, a rather gloomy mood prevailed. Fatima confessed that she had found the suitor "not modern". He had announced that any wife of his would not be allowed to work outside the home — a decision that Fatima felt should be hers to make. Mohammed, her father, would be left with the awkward job of halting the proceedings in as tactful a way as possible.

Shortly thereafter, I left for Europe to attend a conference and visit my family. I was gone for several weeks. I returned to find a subdued Fatima confined to the house. Fatima sat in the parlour with the shutters drawn and a semi-permanent headache. Her father kept to his tailor's shop, which adjoined the house. I wondered whether there had been a death in the family. Soon, Fatima explained. While I was absent,

she had turned down two additional suitors. They simply were not modern enough — they were not what she hoped for — she wanted a friend with whom she could talk and share her future life. Surely her parents must be able to find someone like this for her.

Initially, her father, Mohammed, had feared that I might be a bad influence, encouraging Fatima to seek the kind of independence and autonomy that Western women had. Gradually, he saw that, much as I wanted Fatima to be happy, I understood that she had no desire to be a trailblazer or a rebel. She very much wanted the approval and support of her family and community in her married life. He confided with some exasperation that he was at his wit's end. Carolyn — to turn down one suitor is understandable — but to turn down three! And these are my relatives — what am I to do?

When I left the village, and Egypt, I had no contact with Fatima and her family. I managed to have a friend deliver photos from my time with them. But Fatima did not read and write easily, and I had no idea how to send them letters, or whether my rather bad Arabic handwriting would be comprehensible. A year later, a letter from Fatima suddenly reached me, one written by a scribe. She wanted me to know that her parents had found a fourth suitor — a young man, handsome and modern, just as she had hoped. They had moved together to Cairo and she was expecting her first child. Fatima's father's love for his daughter had won the day.

FORGIVING GENOCIDE

My final hero is Damien. He and I worked together many years ago in the 1980s to implement Burundi's first national demographic and health survey. He was a wonderful colleague and friend. At that time, he was a Rwandan refugee in Burundi — a Tutsi who had fled Hutu-governed Rwanda and sought refuge in Burundi, which was governed by the minority Tutsis.

When the genocide took place in Rwanda, I feared that similar events would take place in Burundi. I had not seen Damien for several years but I contacted him, hoping to help him find a job outside the region.

I failed in that attempt, and Damien soon wrote to tell me that he and his family had moved back to Rwanda where he felt they would be safe. He quickly acquired a senior position in the ministry responsible for repatriating the Rwandan refugees living in camps in Tanzania and Zaire. By coincidence, I took on a short-term assignment with the International Rescue Committee to look at communications between these camps and the government ministries and humanitarian organizations that were getting life moving again inside Rwanda. In my first few days in Rwanda, I startled Damien by turning up at his office — we had not seen each other for years — and informing him that we would be working together again. Both our jobs, in different ways, were geared towards ensuring the peaceful return to Rwanda of the refugees in the camps.

I came to know Damien's wife, Annonciata, and to learn their story. When they returned to Rwanda after the genocide, they found that every single one of their relatives had been killed — with one exception — a young man of 15 years who had, by some miracle, survived and found them. Damien and Annonciata raised this young man with their own five children.

One evening, over dinner, I asked Damien how he could work every day to ensure the return of the refugees, among them the killers of all of his family and of Annonciata's family too. While I waited for his reply, I tried to imagine what it would be like to return home to find that all your relatives had been killed — hacked to death by the people it was now your job to bring back to your country. These were the same people who had forced him to live in exile for many years of his life. How easy it would be to feel that their current situation was more than justified.

Damien thought for a moment before responding. Then he held my attention and said: I have been a refugee — I know all too well what it is like to live without rights and security, and to know that your children will grow up without rights and citizenship. Nobody should have to live as a refugee, no matter what they have done. We all need to think of our children — what kind of future do we want for them and what kind of country do we want them to live in? These people must

come home and we must rebuild Rwanda together. Truly, Damien is one of my heroes.

CAROLYN MAKINSON grew up in Derbyshire and has lived and worked at various times in the United Kingdom, the United States of America, Belgium, Egypt, Burundi and Kenya. A demographer by training, she became aware of the plight of refugees during the 1990s and has since led the Women's Refugee Commission and the European operations of the International Rescue Committee, one of the world's largest humanitarian organisations.

INTELLECTUAL SILOS AND BROAD-BASED UNDERSTANDING

By George Ellis

One of the issues in university education is what breadth of understanding is reflected in both the teaching and research. There is a regrettable tendency for academics, having become great experts in their own field, to then remain bunkered down in those fields for ever — indeed often taking a remarkably narrow view even of these specialist fields. This narrow world view is then transmitted to the students, together with an intolerance for other views, or at least an undervaluing of their worth. Many examples can be given from many disciplines: one classic example was the way the world of psychology fell prey to Watson's very narrow views on behaviourism;[1] another is the disdain expressed in some literary circles for scientific thought;[2] a third is the similar disdain expressed by some pure mathematicians for applied mathematics,[3] or theoretical particle physicists for more applied physics.[4]

Naturally this tendency leads also to redoubtable defence of one's academic territory against incursions by newcomers from other academic areas. Defence of academic turf is a characteristic feature of many institutions. The idea of interdisciplinary studies may be praised in theory, but in practice various barriers are put in the way, including a failure of the university system to reward interdisciplinary work; it is often at least implicitly looked down on as of inferior quality.

This is highly regrettable for many reasons. Firstly many of the most

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1 See Merlin Donald, *A mind so rare: The evolution of human consciousness* (New York: W. W. Norton & Co., 2001), for a rebuttal.

2 See C. P. Snow, *The two cultures* (Cambridge: University Press, 1960) for a discussion.

3 See G. H. Hardy, *A mathematician's apology* (Cambridge: Cambridge University Press, 1940) for an example.

4 To avoid embarrassment I refrain from giving names here.

important questions are interdisciplinary, and cannot be studied in a narrow way — the example of systems biology comes to mind,[5] or any truly adequate studies to do with the brain-behaviour-mind interaction.[6] Secondly the experts in their own field are often even very narrow as regards their own field: the example of insistence on a gene-only centered view of biological development comes to mind[7], when in fact the situation is much richer.[8] Such a view distorts and cramps the development of the subject itself.

I regard all these phenomena as aspects of fundamentalism, which I define as *a partial truth being claimed to represent the whole truth*.[9] It is very widespread not only in religion, but also in academia. Naturally the partial truth represented as the whole truth just happens to be the one in which you yourself are an expert; thus you claim the intellectual high ground as regards all your adversaries, who may not be similarly expert in your specific academic corner. The fact that you may be reciprocally ignorant of theirs is beside the issue.

The particular dominant tendency is to push a reductionist viewpoint in this way, claiming that physics explains everything about life (if you are a physicist), or molecular biology does (if you are a molecular biologist), or evolutionary biology does (if you are an evolutionary biologist), and so on. But physics can't explain everything[10] because there is top down causation in the hierarchy of complexity.[11] For the

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5 See Denis Noble, *The music of life* (Oxford: Oxford University Press, 2006)

6 For example V. S. Ramachandran, *The tell-tale brain: Unlocking the mystery of human nature* (London: William Heinemann, 2011).

7 Richard Dawkins, *The selfish gene* (New York: Oxford University Press, 1976).

8 David Sloan Wilson & Elliot Sober, "Reintroducing group selection to the human behavioral sciences", *Behavioral and Brain Sciences* 17, 4 (1994): 585–654; Rob Boyd & Peter J. Richerson, "Culture and the evolution of human cooperation": http://www.sscnet.ucla.edu/anthro/faculty/boyd/Publications.htm; Eva Jablonka and Marion J. Lamb*, Evolution in four dimensions: Epigenetic, behavioural, and symbolic variation in the history of life* (Massachusetts: Massachusetts Institute for Technology Press, 2005).

9 George F. R. Ellis, "Physics, complexity, and causality", *Nature* 435 (2005): 743.

10 *Ibid.*

11 George F. R. Ellis, "On the nature of causation in complex systems"

same reason, neither genetics nor neuroscience nor evolutionary biology can fully explain human behaviour

A specific recent example is the claim that the existence of religion can be explained purely in evolutionary terms, thereby showing why it exists and hence showing it is not true, as it has been explained away. But this is a non sequitur, and in fact is a specific example of *the evolutionary origins fallacy***,** namely the belief that once you have an evolutionary explanation of some human behaviour, you have completely explained it. This is simply not the case. To see this, realise that this argument applies to any human activity or understanding whatever, including all scientific theories and indeed evolutionary psychology itself. Does this fact mean that evolutionary psychology is explained away? No it does not: for the real situation is that an evolutionary psychology explanation for any human activity, theory, or belief whatever is always a partial and incomplete explanation, and its existence is irrelevant to the truth claims of the theory involved.

The claim there has to be an evolutionary psychology explanation for the existence of evolutionary psychology does not prove that any specific aspects of that theory are either correct or incorrect! The same holds for an evolutionary psychology explanation of theoretical physics and for religious beliefs.

A second example is the way some philosophers, psychologists and neuroscientists tell us that consciousness is just an epi-phenomenon. Let me quote from Merlin Donald's book *A mind so rare*:

> Hardliners, led by a vanguard of rather voluble philosophers, believe not merely that consciousness is limited, as experimentalists have been saying for years, but that it plays no significant role in human cognition. They support the downgrading of consciousness to the status of an epiphenomenon… A secondary byproduct of the brain's

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Transactions of the Royal Society of South Africa, centenary issue, 63 (2008): 69-84. http://www.mth.uct.ac.za/~ellis/Top-down%20Ellis.pdf.

> activity, a superficial manifestation of mental activity that plays no role in cognition.[12]
>
> Dennett is actually denying the biological reality of the self. Consciousness is an illusion and we do not exist in any meaningful sense. The practical consequences of this deterministic crusade are terrible indeed. There is no sound biological or ideological basis for selfhood, willpower, freedom, or responsibility. The notion of the conscious life as a vacuum leaves us with an idea of the self that is arbitrary, relative, and much worse, totally empty because it is not really a conscious self, at least not in any important way.[13]

But this is not in fact what is implied by the science, which has a long way to go before it properly understands the brain, and has made virtually no progress at all in understanding the hard problem of consciousness (however many of the hardliners even deny there is such a problem). There is not even a beginning of an approach. I prefer to run this whole argument the other way round, starting with our daily experience. Consciousness and conscious decisions are obviously real, because that is the primary experience we have in our lives. This is the basis from which all else — including science — proceeds. It is ridiculous to give up that primary experience on the basis of a fundamentalist theory which ignores this fundamental data. And that theory is not even self-consistent, because if that were indeed the case, the entire scientific enterprise would not make sense: we would have no reason to believe what any scientist says. Thus I take the causal efficacy of consciousness as a given which underlies our ability to carry out science and to entertain philosophical and metaphysical questions. And as a consequence, ethical choices and decisions can be real and meaningful.

A final example is the view that one could live a purely rational life: that emotion, faith, and hope simply get in the way of rationally desir-

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[12] Donald, A *Mind So Rare,* 29, 36.
[13] *Ibid.* 31, 45.

able decisions.[14] This viewpoint that underlies much of present day scientism.[15] It is my contention that this view of a purely rational way of existence is a deeply flawed view of how we can conduct both personal and social life. It is not possible to reason things out and make decisions purely on a rational basis. The true situation is much richer than that. In order to live our lives we need faith and hope,[16] because we always have inadequate information for making any real decision. Faith is to do with understanding what is there, hope with the nature of the outcomes. When we make important decisions like whom to marry or whether to take a new job, we never have enough data to be certain of the situation or the outcome. We can keep gathering evidence as long as we like, but we will never be truly sure as to how many people will buy our product, how people will treat us, and so on. Thus our choices in the end have to be concluded on the basis of partial information and are necessarily to a considerable degree based in faith and hope. This is true even in science: embedded in the very foundations even of science there is a human structure of hope, and trust.[17] Secondly, our emotions are a major factor in real decision making[18] — no decisions are made purely as a result of rational choice; the first factor effecting what we tend to do is the emotional tag attached to each experience, memory, and future plan. For example, the hoped-for joy of successful achievement underlies most work in science; without it, science would not exist. Thirdly, we need values to guide our rational decisions; ethics, aesthetics and meaning are crucial to deciding what kind of life we

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[14] "Rational, *adj.* 1: (of behaviour, ideas, etc) – based on reason rather than emotions: a *rational argument/ choice/ decision – rational analysis/ thought.* 2: (of a person) able to think clearly and make decisions based on reason rather than emotions": *Oxford Advanced Learner Dictionary of Current English* (Oxford University Press, 2000).

[15] Peter William Atkins, "The limitless power of science", in *Nature's imagination: The frontiers of scientific vision,* J. Cornwell, ed. (Oxford University Press, 1995): 122-132.

[16] George F. R. Ellis, "On rationality, emotion, faith, and hope: Being human in the present age", in *Humanity in science and religion: The South African experience*, Augustine Schutte, ed. (Cluster Publications, 2006).

[17] Robert P. Crease, "The paradox of trust in science", *Physics World* 18 (2004).

[18] Antonio Damasio, *Descarte's error* (New York: Harper Collins, 2000) and *The feeling of what happens* (New York: Random House; Vintage, 2000).

will live. They are the highest level in our goals hierarchy, shaping all the other goal decisions by setting the direction and purpose that underlies them: they define the *Telos* (purpose) which guides our life.[19] They set the framework within which choices involving conflicting criteria will be made and guide the kinds of decisions which will be made. These highest level understandings, and the associated emotions, drive all else. Thus the desire to free us from irrationality leads to the myth of pure rationality, suggesting pure reason alone is the best basis for a worthwhile life. But this is a completely inadequate understanding of causation on which to base a full life. Rationality, Faith, Hope, and Doubt as well as Imagination, Emotions and Values are all important in a full understanding of human choices and decisions. They all interact with each other and are causally important in the real world.

There are many limits to what we can know within the sciences, because science deals with the generic, the universal, in very restricted circumstances. It works in circumstances so tightly prescribed that effects are repeatable and hence can be reliably duplicated and tested. But most things which are of real value in human life are not repeatable. They are individual events which have meaning for humanity in the course of our history. So science does not encompass either all that is important or indeed all that can reasonably be called knowledge. In particular, ethics is outside the domain of science because there is no scientific experiment that determines what is right or wrong.

The source of values is a key point; I do not have space to discuss it here, but refer to a talk I gave in Australia where it is covered.[20] Correspondingly, aesthetics is also outside the boundaries of science. No scientific experiment can say that something is beautiful or ugly. Both are related to the way we understand meaning in our lives – what is valuable and what is not, what is worth doing and what in fact makes

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[19] Nancey Murphy and George F. R. Ellis, *On the moral nature of the universe* (Minneapolis: Augsburg Fortress, 1995).

[20] George F. R. Ellis, *Faith, hope, and doubt in times of uncertainty: combining the realms of scientific and spiritual inquiry",* James Backhouse lecture at the Australia yearly meeting of the Religious Society of Friends [Quakers](2008): http://www.mth.uct.ac.za/~ellis/Backhouse_Lecture_rev2.pdf.

life meaningful. These are areas of life which cannot be encompassed in science: they are the proper domain of philosophy, religion, and spirituality

So crucial issues lie in the interfaces between subjects, requiring a truly broad-based understanding for adequate interrogation. But there are dangers here. It is easy for the expert in one area to behave as a true novice in another, as they do not have the in depth understanding of issues involved and discussions that have taken place. How can one enter a new subject at adequate depth, without being irrelevant because you just don't understand the issues adequately?

It is absolutely key that before jumping into another academic area, one becomes sufficiently *au fait* with key issues and controversies that one does not appear just ignorant. There is a fine line to be drawn here: too long an apprenticeship while reading about a topic will not only take a great deal of time, it may tend to sap the original thoughts and new insights one might contribute if one becomes embalmed in the orthodoxy of the field. One can learn much of what is needed on one's own, if given guidance by someone in the field. But the best is to engage in a research project with someone who is deeply imbedded in it.

An example of how to do this is a twelve year program run jointly by the Centre for Theology and Natural Sciences (CTNS: Berkeley) and the Vatican Observatory (Castel Gandolfo/Tucson). Every second year a meeting was held on a relevant scientific topic, with a core group of scientists, philosophers, and theologians who attended every meeting, and a number of top level experts in each subject area (quantum cosmology, quantum physics, neuroscience, etc.) joining in the specific meetings on that topic. Draft papers were prepared six months in advance by each participant and circulated, responses came in at four months in advance, and a revised paper two months in advance. After the meeting, one more revision of each paper was undertaken to produce the final volumes.[21] So a true interdisciplinary dialogue was possible, with experts in each area listening to each other. To be sure

[21] http://www.ctns.org/books.html.

there were problems with use of different language for the same topics — but understanding these language differences was an essential part of the learning experience. And this then led to further truly interdisciplinary collaborations, for example when I teamed up with a professor of theology and philosophy to write a book[22] on the issue of the origin and nature of values. She had the research depth in those subjects to ensure that the product was not simply foolish from a philosophical viewpoint — something I could not do on my own.

So I recommend becoming an expert in some subject area first, understanding it in full depth, and then broadening out and seeking the deeper relationships and understandings that come from a more broad based engagement across subjects. But in doing so make sure you engage experts in the new area, and hopefully co-author papers or even books with them to ensure that you know what the relevant historical and current debates in the other areas are.

GEORGE F. R. ELLIS is an academic and part time social activist. He is South African born and studied at the University of Cape Town and then Cambridge, where he taught for some years before returning to his alma mater. He co-authored a book with Stephen Hawking on the Large Scale Structure of Space Time*, and has written on many aspects of cosmology, ranging from the very technical to the philosophical. He has more recently worked on the emergence of complexity and the way the human mind functions. He was a co-author of the South Africa Government's* Green Paper on Science and Technology *and has been President of the International Society of General Relativity and Gravitation, the International Society for Science and Religion, and the Royal Society of South Africa. He is a Fellow of the Royal Society (London).*

[22] Murphy and Ellis, *On the moral nature of the universe*.

THE LIVING SPIRIT OF BENJAMIN FRANKLIN

By Mary Patterson McPherson

The American Philosophical Society, held in Philadelphia "for promoting useful knowledge",[1] is the oldest learned society in the United States and now one of the liveliest organisations of its kind in the scholarly world.

In 2011 the Society includes 813 domestic and 162 international Members from 26 countries. In addition to its biannual meetings for members and friends, it supports a major research library, active fellowship and publication programs, and a small museum that has attracted since its opening in 2001 more than 600 000 visitors.

The Society is housed in four handsomely appointed buildings: Philosophical Hall (built in 1789, renovated last in 1998-1999), Library Hall (built in 1959, renovated in 2005-2008), Benjamin Franklin Hall (acquired in 1981; renovated in 1987) and Richardson Hall (acquired in 2000; renovated in 2003). Its endowment, which supports 75% of the Society's operation, is currently approximately $130 million.

The Society we know today emerged from a union of several earlier societies, each of which profited from the intellectual energy of Benjamin Franklin (A).[2] In 1727, Franklin brought together a group of congenial friends in a club called the *Junto* which was concerned largely with the mutual improvement of its members and the public benefit

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[1] Benjamin Franklin, *A proposal for promoting useful knowledge among the British plantations in America*, (May 14, 1743). Franklin printed his renowned Proposal; in a double folio sheet. Originals are in the Library of Congress and in the Mason-Franklin Collection at Yale University.

[2] (A), (B) and (C) designations - Before the union of The American Philosophical Society and the American Society into the American Philosophical Society held at Philadelphia for Promoting Useful Knowledge in 1769… there were members of both societies and members of either society. It is impossible to establish the date of election of many of these members. Accordingly, in the list… those marked (A) were members of the two societies at the time of the union, (B) those who were members only of the American Philosophical Society, and (C) those who were members only of the American Society.

of Philadelphia. This group shared ideas and experiences rather than what became a later focus — discoveries and inventions.

Philosophical Hall photographed by Frank Margeson, courtesy of the American Philosophical Society.

In this period, several Philadelphians had regular correspondence with Members of the Royal Society of London, to which 19 Americans had been elected before 1743, and they were also knowledgeable of the purposes and work of the Dublin Philosophical Society founded in 1731 "for improving husbandry, manufacters and other useful arts".

In 1739, John Bartram (A), a Philadelphia Quaker farmer with an interest in botany and natural history, had correspondence with, among others, Peter Collinson, a British botanist and member of the Royal Society, who imported seeds from North America and later financed the travels of Bartram who provided him with seeds and plants from the Colonies. Bartram became enamored with creating in America a Society like the Royal Society to promote inquiries into "natural secrets,

arts and syances". His plan included procuring a house, and the sponsorship of lectures and expeditions. Though the idea was considered at that time too ambitious, it was picked up four years later by Franklin, who revised and simplified it, and offered his fellow Americans "a proposal for promoting useful knowledge among the British plantations in America".[3]

The proposal was simple: to provide an opportunity for 'virtuosi, or ingenious men' from across the colonies to come together to share their observations, experiments and research. Through these exchanges, new ideas could be generated, and the work of one man could benefit from the insights and scrutiny of another. More important, such collaborations could yield inventions and improvements of use to a broad public.

The new Society began to hold meetings in 1744 and elected persons such as naturalist, Dr. John Mitchell (B) of Virginia, and mathematicians James Alexander (B) and Cadwallader Colden (B) of New York. But after a few meetings, interest lagged and Franklin found the Philadelphia Members, upon whom success depended, "very idle gentlemen; they will take no pains". In 1746 most activities ceased. In the 1760s younger Philadelphians, sympathetic to the resistance to the Stamp Act, and interested in strengthening the Colonies economically as well as politically, formed a new American Society for promoting useful knowledge.

Charles Thomson (C), later secretary of the Continental Congress, spelled out its program: "improved methods of farming, including the breeding of livestock, new medicines and cures for specific diseases, new manufacters and improvements in the old, new sources of mineral wealth". He made it clear that other useful subjects would be most welcome.

In 1768 then, there were two Societies with similar purpose, organisation and program. Interestingly, both were inter-colonial and

[3] Franklin, *A proposal for promoting useful knowledge.*

international though the Members had rather different political and religious leanings.

Annoyed at the success of the newer Society, Members of the original American Philosophical Society concerned that they had not been invited to join, revived the older body. But good sense prevailed finally and the two Societies merged in January of 1769 becoming "the American Philosophical Society, held at Philadelphia for promoting useful knowledge" — with Franklin, then in England, as President.

The election of Franklin was not uncontested however. Supported by the Quakers' anti-proprietary members, Franklin defeated Governor James Hamilton (B) who as a result never attended another meeting, and Thomas Penn declined the Society's invitation to be its Patron. To Hamilton and Penn the reorganised Society must have seemed political opposition in another guise.

Franklin spent the next six years abroad serving the newly formed Society principally as a conduit for correspondence, gifts of books and notices of nominations and elections. Franklin did play an important role, however, as an ambassador to the older European societies by circulating the new world Society's publications and thereby securing an exchange of *Transactions* and *Memoirs* and establishing the American Philosophical Society's reputation.

The newly formed American Philosophical Society was saved early in its history from political squabbling by its involvement with a major project to study the transit of Venus and the planet's atmosphere. An active Member of the Society, David Rittenhouse (A), was the first man to build a telescope in the Colonies. Astronomers who had been studying Venus chose Rittenhouse to take on this important investigation in 1769. Twenty-two telescope stations were set up, half of which were manned by Members of the Society. Rittenhouse calculated the distance from earth to sun to be 93 million miles. His report of the transit, published in the Society's *Transactions*, was hailed by European scientists, helping to establish the reputation for the excellent work of the American Philosophical Society.

Rittenhouse — astronomer, inventor, clockmaker, mathematician and surveyor, who served as librarian, secretary, and, after Franklin's death in 1790, second President of the Society until 1769, went on to survey the Delaware-Pennsylvania border — work so precise it was simply incorporated in the *Charles Mason and Jeremiah Dixon's Survey of the Pennsylvania-Maryland Border*. A member also of the Royal Society, Rittenhouse was active in Pennsylvania politics and served as the first director of the United States Mint.

The American Revolution, with its attendant political controversies, put the Society into what one of its members described as a "languishing state". It was only with the return of Benjamin Franklin in September 1785 from Paris that the Society was reinvigorated.

For years, as Franklin's popularity and reputation grew, scientists sent him their publications which he in turn used to build the Society's collection. At a meeting in the September of his return to Philadelphia, he presented at the American Philosophical Society meeting two scientific papers for discussion which reasserted the Society's purpose. Franklin proposed at that same meeting that Philosophical Hall be built to house the work of the Society, a project he later supported generously. The Society flourished under Franklin's direction, publishing, providing research support, and opening the new building, Philosophical Hall, next door to Independence Hall, in November of 1789. It remains the Society's headquarters today.

During the next half century the Society served the young nation as its library (later the Library of Congress), museum (later the Smithsonian), patent office and academy of sciences. Thomas Jefferson (1780)[4], who served as the third President of the Society before, during and after he was President of the United States, called on its members frequently for advice. The Society, for example, under Jefferson's direction, prepared the scientific instruction for Meriwether Lewis (American Philosophical Society 1803) and William Clark, whose journals from their expedition Jefferson later deposited in the Society's

[4] All bracketed dates following names will henceforth refer to the first year of membership to the American Philosophical Society.

library. Other departments of the government called often on its maps, scientific instruments, and publications.

Discoveries in new and applied sciences were encouraged and America's first museum was established at the American Philosophical Society in 1794 by Jefferson's close friend Charles Willson Peale (1786). He rented space for the museum, and his large family, in Philosophical Hall, and remained there for 15 years. Two of Peale's sons were born in the Hall. One appropriately was named Franklin.

Other notables also took up residence as tenants in the Hall during this period. Thomas Sully (1835), well-known portrait painter, had a studio and gallery in the Hall from 1812-1822 and the Society became the beneficiary of some of his best portraits.

John Vaughan, a Member of the Society since 1784, and Librarian from 1803 until his death in 1841 lived in the Hall after the Peales departed. For half a century, Vaughan collected books, prints and manuscripts for the library with relish. He begged institutions and individuals for gifts, and accessioned and catalogued every new acquisition himself.

The collection built by Vaughan was international in character from the first, particularly in the long runs of learned journals, *Transactions* and other publications of the Royal Society of London, as well as the academies of science of Berlin, Paris, St. Petersburg, Stockholm and Turin. Numbering about 60 exchanges in Vaughan's day, such exchanges amount to 272 today with journals coming in from across the world.

Following the Society's success in fostering the Lewis and Clark expedition in concert with the federal government, it continued to play a part in the development of science in the early Republic. At the request of the Secretary of War, members of the Society suggested subjects for scientific study and nominated people to accompany Major Stephen H. Long's 1919 expedition to the Rocky Mountains. Long (1823) sent a collection of plants to Philadelphia and a number of the expedition's reports were published in the Society's *Transactions*.

Similarly, the Society was active in planning the South Seas Expedition, commanded by Lieutenant Charles Wilkes (1843), which charted some two hundred islands, discovered the Antarctic continent and brought back natural history collections that helped develop the United States Botanical Garden, the National Herbarium, the Naval Observatory and the National Museum. Today the Society's collections include Titian Ramsay Peale's (1833) splendid watercolors and sketches documenting both the Long and Wilkes expeditions.

Major scientists of the period such as Robert Hare (1803), a pioneer in the study of salts; Joseph Henry (1835), the most notable physical scientist who worked on electromagnetism, and Alexander Dallas Bache (1829), a geophysicist famed for his research on terrestrial magnetism, all were actively involved in presenting papers and furthering the work of the Society.

Following the War of 1812, president of the Society, Peter S. DuPonceau, a French lawyer, (1791) with Albert Gallatin (1791) and Thomas Jefferson made the Society the center of ethno-history and Native American linguistics, a commitment continued today.

During the late 1700s and early 1800s several other learned societies based on the Philadelphia pattern were established. In 1786 the Connecticut Society of Arts and Sciences was established; Salem, Massachusetts in 1781 formed a Philosophical Library with books of the Irish chemist and physician, Dr. Richard Kirwan (1786, international member from England), part of the cargo of a British merchant vessel seized by an American privateer. New Yorkers tried unsuccessfully to set up a Society in 1784. Delaware's Philosophical Society on the other hand opened its lectures to the public including women — a first.

Other societies in Mississippi; Pittsburgh; Virginia and Washington, DC were organised with great appeal to amateurs of science throughout the nineteenth century.

The most successful and long-lasting Society other than the American Philosophical Society, however, was that founded by John Adams

(1780) in Cambridge, Massachusetts. Though Adams found Philadelphia lacking in almost all respects compared with Boston, he did concede to his wife, Abigail, that "they have more wit than we. They have societies; the Philosophical Society particularly, which excites a scientific emulation, and promotes their fame. If ever I get through this scene of politiks and war, I will spend the remainder of my days, in endeavoring to instruct my countrymen in the art of making the most of their abilities and virtues. An art, which they have hitherto, too much neglected. A philosophical society shall be established at Boston".[5]

In 1780, the Academy was founded by James Bowdoin (1787), John Adams and John Hancock. Their objective, stated in the Charter, was to "cultivate every art and science which may tend to advance the interest, honor, dignity and happiness of a free, independent and virtuous people. Prominent men, also members of the American Philosophical Society, Benjamin Franklin, George Washington (1780), Thomas Jefferson and Alexander Hamilton (1780) soon joined the new Academy.

In 1838, the Academy urged that both institutions join to form an American Association for the Promotion of Science. But Joseph Henry, who had watched what had happened to the British Association for the Advancement of Science when they included enthusiastic amateurs, feared that the merger might weaken the effort to foster professional science in the United States, so Boston's overture was politely declined by Philadelphia as inexpedient.

The next half century was less interesting than the first part of the 1800's. For one reason, the Society's position in the learned world was no longer preeminent. More specialised institutions sprang up like The Academy of Natural Sciences in Philadelphia, and the government began to create its own scientific agencies, again with a more focused purpose — for example the Smithsonian, the Corps of Topographical

[5] Little H. Butterfield, ed., *The Adams Papers: Adams Family Correspondence*, 2 (Cambridge: Harvard University Press, 1963): 75.

Engineers, the Coast and Geodetic Survey.

Even though it was a quieter period for the Society, excellent papers on a wide variety of subjects began to be published. Offerings in anthropology and archaeology took place in the *Transactions* and *Proceedings,* earlier awarded only to scientific papers, the best of which were now appearing in government sponsored publications.

The Society did support explorer Elisha Kent Kane (1851) in his Arctic explorations in the 1850s during which period Kane became something of a national celebrity. The Society also supported geological surveys and geological and ethnographic photography, including many photographs of North American Indians. The first real attempt to admit women members occurred in 1869 and three women were elected who stood at the top of their respective fields: Maria Mitchell, the first female astronomer in the United States of America; Mary Somerville, a well-known British mathematician, and Elizabeth Cabot Agassiz, naturalist and pioneer in women's education, founder and first president of Radcliffe College.

Franklin had brought the first woman Member into the Society in 1789, the Princess Ekaterina Romanova Dashkova, who was the Director of the Russian Academy of Sciences in St. Petersburg. She and Franklin became acquaintances in Paris, their only meeting at the Hotel de la Chine on February 3, 1781. As she was invited by Franklin to the Society in Philadelphia, Franklin was invited to become a Member of the Russian Academy. But 80 years passed before another woman was elected and following the three elected in 1869, a very small number of women, often one a year, were elected until the mid-1980's when the pace began to pick up. By 2009, 234 women had been elected in the 266 years since the Society's founding.

Women now play an active role in the Society, giving talks at the Meetings, serving as officers of the American Philosophical Society and members of the committees that decide Society policy. Scientists, artists, humanists, social scientists, jurists, and administrators of leading colleges and universities, the women Members of the Society are now engaged in every aspect of the work of the American Philosophical

Society. Mary Maples Dunn (1999) was the first women executive officer serving jointly with her husband Richard S. Dunn (1998).

Thirteen Presidents of the United States have been elected to the American Philosophical Society beginning with George Washington, John Adams, Thomas Jefferson, James Madison (1785), and John Quincy Adams (1818) — most prior to their election to the Presidency. Jefferson, the third president of the country, also served as the third president of the Society for 18 years. He deposited approximately 300 documents in the Society's Library including a handwritten draft of the Declaration of Independence and a first edition of *Notes on the State of Virginia*. His great interest in Native American peoples and their various languages led to a splendid collection which today serves as one of the jewels in the Library's crown.

Jefferson, in his letter of acceptance "to the Gentlemen of the Society, written from Monticello on January 28, 1797", when he was Vice President of the United States, notes, "The sufferage of a body which comprehend whatever the American world has of distinction in philosophy and science in general is the most flattering incident of my life, and that to which I am most sensible". He goes on to say, "I feel no qualification for this distinguished post but a sincere zeal for all the objects of our institution, and an ardent desire to see knowledge so disseminated through the mass of mankind that it may at length reach even the extremes of society, beggars and kings".

Later John Adams served as president of the country and of the Academy of Arts and Sciences, that he had helped found in Boston. Today the Academy, housed in the elegant quarters in Cambridge, is also a thriving organisation composed of 4,000 American and 600 foreign honorary members.

James Madison, member of the Society for 51 years, was also generous to the Library, depositing his extensive meteorological journals he kept at his plantation. Encouraged by Jefferson to keep such notes, Madison followed bird migrations, sowing and harvesting from approximately 1784 to 1802.

Several presidents of the country, Ulysses S. Grant (1868) and William Howard Taft (1909, were elected to the American Philosophical Society just as they began their service to the country and Theodore Roosevelt alone was elected during his Presidency, in 1906. Jimmy Carter (1991), the last American President to be elected to the Society, was recognised ten years after his term as President.

During the decades of the 1930s and 40s, the Society enjoyed particularly strong leadership and financial support. The programs supported by the Society today were put on a firm footing. A decision was made to keep the Society in its building, next to Independence Hall, on 5th Street, rather than moving to the Parkway; classes of membership were established and the finances of the Society stabilised thanks to a most generous bequest of $4 million provided by Society member, Richard A.F. Penrose (1905), a Philadelphian by birth and a highly successful commercial geologist.

Today the Society follows quite closely the course charted by the Society's 1930s leaders, Edwin G. Conklin (1897), Roland S. Morris (1922) and Francis X. Dercum (1892). In 2011, Members are no longer concentrated in Pennsylvania and New England; they come from 34 states and 26 countries. The largest concentrations are in California (171), New York (143), Massachusetts (126), New Jersey (91), Pennsylvania (55) and England (50). Twelve South Africans have been elected to the Society; all but Helen Suzman are still living.

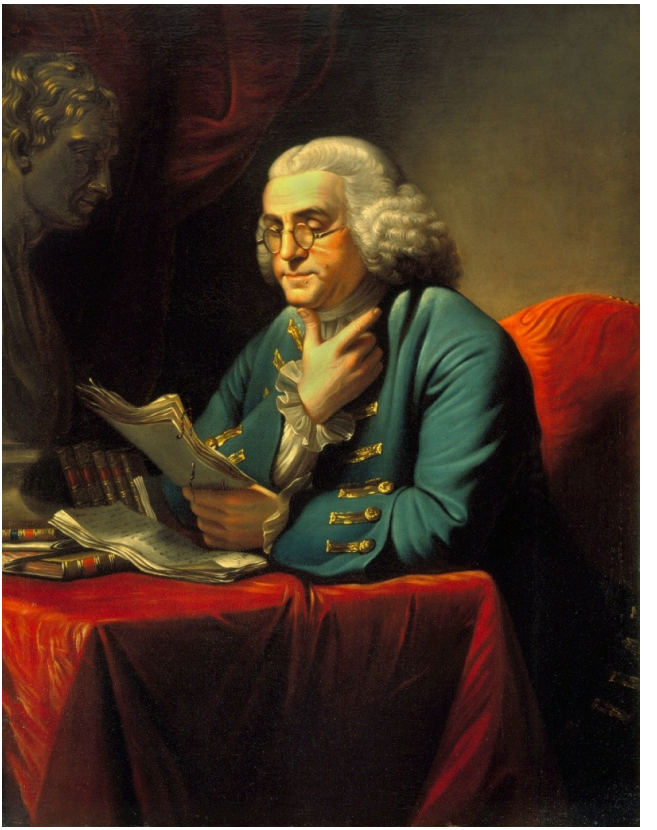
New Members are nominated by their peers in five "Classes" — the mathematical and physical sciences; the biological sciences and medicine; the social sciences; the humanities; and the professions, arts and public affairs. The members are invited to Philadelphia twice a year, in November and in April, to attend, present papers, and enjoy lively discussion with friends and colleagues. These meetings are not so different from those instituted by Franklin, whose portrait, along with those of Washington and Jefferson, hang above the speakers on the stage at the front of Benjamin Franklin Hall auditorium. The talks are webcast live, for the benefit of the public and are also archived on the Society's website. Papers are given on all topics from yacht making — given by a scientist member in Class 2, who had won an Olympic Gold

Medal in sailing — to the latest achievements in organ transplantation to a discussion by Supreme Court Justices on "How judges know what they know". Though the meetings are open and many people watch on the Society's website, it is really the other four Society programs that more directly serve the public.

Talks are published in the Society's *Proceedings*. The Society has an unbroken record of publishing since 1771, producing a series of monographs (*Transactions*), scholarly books (*Memoirs*) and the quarterly journal (*Proceedings*). Recently the Society has also begun to publish electronically under the Lightning Rod Press with a print-on-demand option. Books are marketed by Amazon, Google and Yahoo and a number of the Society's publications going back to its beginnings can be found in JSTOR (The Journal Storage Project).

In 2001, the Society reinstituted a museum, housed again in Philosophical Hall, with the charge to interpret the Society's rich collection and explore the intersections of history, art and science through thematic exhibitions, public programs, and educational outreach to students, teachers and the general public. The most recent show celebrated the 200th anniversary of Darwin's birth and the 150th anniversary of the publication of the *Origin of Species*. The Society has the largest collection of Darwin's papers outside of Cambridge, England. This spring it will present its seventh show: *Of elephants and roses: Encounters with French natural history 1790-1830*.

The Society today is one of the leading providers of grants and fellowships for scholarly research. The Society has six fellowship programmes which have supported 15 500 scholars in the past seventy years. Two-hundred of the young scholars who received American Philosophical Society grants later were elected members of the Society. The grants are awarded on a competitive basis reviewed in most cases by committees composed of members in the relevant fields.



Portrait of Benjamin Franklin by James Peale after that by David Martin, Photographed by Frank Margeson, courtesy of the American Philosophical Society.

Among the programs are Franklin Research Grants, awarded for research related supplies or travel for study in libraries and museums, and the Lewis and Clark Grants for Exploration and Field Research in all Fields. Library Resident Research Fellowships are awarded to scholars working on materials held by the American Philosophical Society Library, and the Phillips Fund for Native American Research in culture and linguistics.

The largest program area outside of the membership and meetings is the splendid independent research library, one of the world's premier repositories for collections in early American history, Native American anthropology and linguistics, and the history of science, technology and medicine.

Scholars come from around the world to work in the Library or contact reference librarians for help with accessing materials for their work. The collection, which continues to grow as members deposit papers and the library secures materials in its collecting areas, consists of more than 10 million manuscripts and more than 300 000 printed items.

The Society's purpose, its early history and its membership throughout have been intertwined with the development of the country in most interesting ways. Initially the "men of speculation" who joined the Society included those at the very center of the formation of the new nation. In addition to Benjamin Franklin — George Washington, John Adams, Thomas Jefferson, Thomas Paine (1785), James Madison and Alexander Hamilton were all members. From its beginnings, leading scientists, statesmen, jurists, humanists, and artists have graced and continue to grace the Society's membership rolls and to enjoy intellectual fellowship and the support and promotion of useful knowledge, just as Franklin proposed in the heady days of the founding era.

MARY PATTERSON MCPHERSON was born in Pennsylvannia, graduated from Smith College, took a Master's degree and taught for 3 years at the University of Delaware. She studied at Bryn Mawr College for a PhD in Philosophy, taught there and became in succession: Assistant Dean, Associate Dean, Dean (1970-1978) and then President (1978-1997). After retiring from Bryn Mawr she joined the Andrew W. Mellon Foundation (New York City, 1997-2007) where she had the great pleasure of working with Stuart Saunders. In 2007 she became the Executive Officer of the American Philosophical Society, the oldest learned society in the United States of America (Philadelphia, 2007 to date).

THE NEXT FEW YEARS

By Philip E. Lewis

My title alludes differentially to a very fine comparative study, *The next 25 years: Affirmative action in higher education in the United States and South Africa,*[1] containing an essay entitled "Looking Back" by the honoree of the present volume, Dr. Stuart Saunders. In a history still to be written, the career of Stuart Saunders as a leader in South African education will not be limited to his role as a stellar contributor to the end of apartheid, which is chronicled in his memoir, *Vice-chancellor on a tightrope*.[2] The strong voice that speaks in his remarkable autobiographical narrative, in which the two decades running from 1975 to 1995 are central, has continued to be heard without let-up during a time when higher education in South Africa has been forced not only to reckon with the country's continuing transition to democracy and its struggle to open up economic opportunity to all of its inhabitants, but also with globalisation and all that it implies for institutions of higher learning on the African continent, where South Africa's wealth and relatively sophisticated institutions thrust it into a position of leadership in education and research. In this essay of tribute I propose both to extend the purview of *The next 25 years* to the full set of issues Stuart Saunders has been confronting over the past decade and to narrow the temporal focus to pressing present-day concerns.

THE HORIZON OF AFFIRMATIVE ACTION

The South Africa in which Stuart Saunders has continued to exert an invaluable influence since retiring from the University of Cape Town (UCT) and assuming responsibility for the Mellon Foundation's grantmaking program for the entire country is something of a proving

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[1] Dr. Stuart Saunders, "Looking Back" in *The next 25 years: Affirmative action in higher education in the United States and South Africa,* David Featherman, Martin Hall and Marvin Krislov, eds. (Ann Arbor: University of Michigan Press, 2009): 259–268.

[2] Dr. Stuart Saunders, *Vice-chancellor on a tightrope: A personal account of climactic years in South Africa* (Cape Town: David Philip Publishers, 2000).

ground for western models of higher education. Like its analogue in the United States, the South African university system has long been under pressure to respond to social and historical imperatives that derive from a legacy of racial injustice. As Saunders's defiant measures at UCT in the 1980s demonstrated, the response in South Africa is no more a simple post-apartheid phenomenon that can be treated as a revolutionary break in continuity than affirmative action in the United States is understandable as a simple result, instantly productive of radical change, of the Supreme Court ruling in Brown versus the Board of Education of Topeka (1954). Indeed, as an occasion for reflecting on the whole of the reformist's trajectory that Stuart Saunders has traced — from physician to educator to grantmaker, from the role of the intra-systemic colleague pursuing equity and excellence[3] from within to that of the active retiree, seeking to promote educational opportunity and quality from without — invites us to take the comparative analysis beyond the contrast of two approaches to affirmative action, American and South African, and to examine the international socio-economic conditions under which the two systems Dr. Saunders represents — the American one as an agent of the Mellon Foundation and the South African one as a lifelong proponent of progress within the system — have been evolving. We may ask, in particular, how the current challenges each system faces as a result of the turbulent global economy affect the impressive comparative insight that the inevitable and crucial focus on affirmative action has generated.

In the typical account of the challenges faced by higher education in 21st century South Africa and in the United States, the reigning leitmotif of affirmative action draws attention to a salient contrast: whereas the American courts sanction only a narrow and provisional accommodation of affirmative action that attempts to enhance opportunities for under-represented minorities while minimizing "reverse discrimination" against the privileged white majority, the

[3] I appropriate these terms from the superb study by William G. Bowen, Martin A. Kurzweil, and Eugene M. Tobin, *Equity and Excellence in American Higher Education* (Charlottesville: University of Virginia Press, 2005), which contains a highly instructive appendix by Ian Scott et al concerning the trade-offs confronted by UCT's leaders before and after apartheid's end.

young constitutional regime in South Africa posits decisively the need to pursue a program of affirmative action designed to correct or compensate for the abuses of the country's racist past. In each case access for students from groups to which it was previously denied is the issue, and operationally it turns upon admissions practices. The United States of America approach relies on the value of diversity in college and university communities. It allows institutions to factor racial and ethnic backgrounds into a complex judgement about whom to admit as students in order to achieve a more diverse student body than the application of purely academic standards would produce. In sharp contrast to this cautious recalibration, the South African approach unequivocally requires the research university, in order to participate strongly in a mandated process of political emancipation and societal reorganisation, to accommodate substantial numbers of students from previously disadvantaged groups. At the point of admitting first-year students, a vital difference between the respective strategies stems from the dearth of qualified applicants in South Africa: too few high school graduates from areas other than those dominated by the white minority have acquired sufficient knowledge and skills to succeed in university-level courses. In the United States of America, by contrast, elite universities have repeatedly demonstrated their ability to recruit cohorts of minority students who, if they are on average less well qualified by conventional standards than typically admitted students from the white majority, prove themselves to be fully capable of succeeding academically and using their college experiences to close the gap between themselves and the more privileged majority.

Affirmative action is thus a practice that elite American schools can implement successfully by making modest, relatively comfortable concessions. The taxing difficulty confronting South African higher education devolves from the wide range of disparities among the university's entering students. To make affirmative action viable for those who lack adequate preparation, the university is obliged to develop — via expansion of the undergraduate curriculum — compensatory educational strategies for dealing with the "articulation gap" between secondary schools and the university.[4] Hence the doubly

[4] Nan Yeld, "Admissions policies and challenges", and Ian Scott, "Who is

greater challenge of affirmative action in South Africa: its corrective mission makes it more ambitious than its American counterpart, and its implementation places the country's top institutions of higher learning under much greater academic strain.

With this well-known background in place, I propose to shift the emphasis away from admissions and the immediate difficulties of educators working to make affirmative action succeed and toward the overarching dimension of social, political, and economic progress that higher education purports to serve. The conceptual superstructure — more or less universal — that presides over such a comparative horizon sets aside the antiquated view of the University as an isolated, ivory-towered institution given over to teaching and research, to the cultivation of knowledge that some might wish to pursue for its own sake. The more pragmatic view that now prevails stresses the institution's capacity to serve as an engine of opportunity, ushering its students along an academic itinerary that ascends from the continuation of general education in the basics — nominally the function of secondary schools — to high-level specialisation in a particular area of study. While nominally providing for entry into a broad-based world of scholarship and research sustained by a respected academic profession, its mission is increasingly oriented toward producing graduates with valuable credentials and research with economically exploitable applications. Quite like its American analogue, the South African university conceives of the ascent to the bachelor's degree or beyond as a guarantee, for the individual, of both socio-cultural and financial advantage.

Moreover, according to a ubiquitous conventional wisdom that pervades the tertiary system in South Africa no less than the systems of the more developed countries of the 'first world', higher education is appropriately a stratified system in which the best institutions — the

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'getting through' in South Africa? Graduate output and the reconstruction of the formal curriculum" in *The next 25 years: Affirmative action in higher education in the United States and South Africa,* David Featherman, Martin Hall and Marvin Krislov, eds. (Ann Arbor: University of Michigan Press, 2009): 229-243 & 175-186.

academic elite — are the ones that matter the most because they lead the others in the pursuit of new knowledge and serve as the beacons of distinction that the others will emulate. For the less distinguished institutions, the defining, system-energising function of the elite is presumed to have a mediating function not unlike the one we encounter in the Girardian account of mimetic rivalry:[5] the desire of the less privileged subject or group is transmuted from targeting an object or capacity that the privileged rival possesses or seeks into a desire to be like the rival — which is to say that the drive toward conflict over a desired object is displaced into a far more diffuse dynamics of cooperative imitation. Hence, in theory, the power of the elite stratum (the imitated) to mediate the potentially disruptive force of desire by making elite status accessible to adept emulators, to pull the rest of the system (the imitating) qualitatively upward by constructing and maintaining the possibility of successful imitation. The elite's self-justification and ongoing capacity to lead depend on allowing intra-systemic competition to develop without losing out to it, on embracing an openness to upward mobility while maintaining a dominant exclusivity.

In a brilliant essay in *The next 25 years*,[6] "Democracy and the choosing of elites", Glenn C. Loury describes the essential role of elites in American society and the vital contribution elite education makes to social stability both in rationing access to influence, power, and privilege and in rationalising the compromises between democracy and meritocracy, between the principle of equal opportunity and the recognition that free and democratic societies have to accredit an unequal distribution of wealth. The supposition underlying the Mellon Foundation's grant-making that Dr. Saunders has overseen in South Africa replicates the one that has informed the foundation's work with colleges and universities in the United States of America. The strategy of supporting the top institutions that will train society's most important leaders and most productive researchers, it is assumed, will

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[5] René Girard, *Deceit, desire and the novel: Self and other in literary structure* (Baltimore: Johns Hopkins University Press, 1966).

[6] Glenn C. Loury, "Democracy and the choosing of elites", in *The next 25 years,* Featherman *et al*, 317-33.

best serve the system as a whole, whether it is a mammoth, multi-tiered construct developed over more than a century, as in the United States of America, or a small, in many respects nascent construct with fewer strata, as in South Africa. But in each case one is now obliged to ask how the prospects of the respective educational elites and their relations with the less privileged institutions arrayed beneath them will be affected by recent trends in higher education. Furthermore, given the world-wide influence of the American model and the international outreach of American-based programs, it seems appropriate to ask, in particular, what the adjustments that began in the American system with the Great Recession of 2007-10 may augur for South Africa's leading universities, and in particular whether their vigorous commitment to affirmative action may face structural/financial obstacles parallel to those that trends in the American system bring to light.

THE CURRENT IMPASSE IN AMERICAN HIGHER EDUCATION

Much studied by experts, American higher education is a mammoth hierarchical system that reflects the structure of a stratified society-at-large. While the flood of writing about the system reflects the diversity within it, two broad views seem noteworthy. The primary or mainstream view observes in institutions of all kinds at all levels what is often termed *corporatisation*, *i.e.*, colleges and universities take on the characteristics of businesses functioning in a market and making ends meet by balancing revenues and expenses.[7] Forced to prioritise their business operations, they purport to maintain their not-for-profit educational missions as separate enterprises designed to serve the public good. The optimistic hypothesis is that a competent administration will keep the business solvent while protecting the faculty and students from untoward interference by the external forces — the state or private investors — that provide them with resources. Such outside in-

[7] For a cogent account of this framework, see Burton A. Weisbrod, Jeffrey P. Ballou, and Evelyn D. Ash, *Mission and money: Understanding the university* (New York: Cambridge University Press, 2008).

fluence, the mainstream view imagines, might compromise academic freedom or the disinterested pursuit of knowledge if it were not kept in check.

A concern often expressed in the wake of the Great Recession, even among proponents of the mainstream view, holds that the business model of higher education is broken or soon will be. As costs increase and income streams falter, the business, it is feared, could stagnate. According to the alternate, revisionist view, the business or administrative model is already unable to protect academic freedom and the integrity of research. It has become so immersed in the development of a knowledge-based economy that its institutions are, like the voices defending the mainstream view, agents participating in the construction of what Gary Rhoades and Sheila Slaughter term a "capitalist knowledge/learning regime".[8] That regime has bred a global system that depends on information technology; it is building new networks of actors and new organisational arrangements that "span and blur the boundaries between public and private sectors"; it subjects the public interest to the vagaries of a vast marketplace for insight, treating knowledge as, precisely, *capital* rather than a public good. The mechanisms of the knowledge-driven economy are at once of a piece with a new and growing system of for-profit higher education and conducive to the "vocational veer", *i.e.*, the surge of pre-professional programs that has invaded undergraduate curricula in the still preponderant not-for-profit sector as students and their families insist that their costly investment should provide them with skilled know-how guaranteeing gainful employment to successful graduates. The spectacular sign of this privileging of pre-professional programs is the current ascendancy of business majors in much of undergraduate education in the United States of America and, concomitantly, a dilution of the commitment to liberal education that was once the hallmark of the undergraduate experience.

Notwithstanding episodic symptoms of crisis, in its colossal, monumental cast the system eschews crisis in favour of inertia; it keeps on

[8] Gary Rhoades and Sheila Slaughter, *Academic Capitalism and the new economy* (Baltimore, Johns Hopkins University Press, 2004): 7.

inching along, adjusting to hard times. While both the mainstream and the revisionist viewpoints offer compelling insights into the way it operates, neither is entirely commensurable with its unmanageability, which is a function of such heterogeneous factors as size, complexity, fragmentation, unpredictability, creativity, passionate commitments to learning and intellectual life, and the special social and moral responsibility that derives from the privilege of being educated. If the system remains a powerful national asset, its current state leaves worried observers at something of a loss: we no longer have a confident understanding of how our society can preserve and strengthen it. In recent years the worries have been intensified by the fiscal problems of state governments and a consequent move toward privatisation in the great state university systems, which grew rapidly after World War II and now serve over 80% of the student population. This massive growth during the 1950s and 1960s took place while government-sponsored research was reinforcing the position of the research university as the dominant model at the pinnacle of a system of knowledge production-and-preservation. The rapid expansion coincided with a shift in the normative assumptions of American society, for which the college degree displaced the high school diploma as the standard educational endpoint. The system's growth was also accompanied by dramatic increases in the cost of a college education. These increases have accelerated since the 1980s. Beyond positioning higher education as a negotiable commodity in which individuals and families invest, the evolving cost structure has had the major socio-political effect of shifting more and more of the financial burden away from the public and onto individual students and their families. The profound consequences of this evolution for educational institutions, their students and faculties are beginning to be manifest.

First, let us consider society at large. The percentage of the American population achieving a bachelor's degree ceased to rise in the 1970s. In recent decades many first-world nations have moved past the United States of America in levels of average educational achievement. This competitive reversal put at risk not only a collective advantage to which the country's rise to 20th century global economic and technological pre-eminence is attributable, but also the long climb toward a progressively more educated general population that characterised

American society from the start of the 20th century until the 1970s. According to the influential account expounded by Harvard economists Claudia Goldin and Lawrence Katz in *The race between education and technology,*[9] such progressive socio-economic development is a function of research and education; research that produces new technologies and education that provides skilled workers capable of applying those technologies. The process they describe has two key effects: it results in interesting, well remunerated jobs that make for a solid labour market, and it enables the growth of a satisfied middle class that, especially in the United States after World War II, steadily improves its lot both economically and culturally. In this national narrative, education comes to be valued as the key institution both socially and psychologically: producing jobs, workers, and well informed citizens in a growth-oriented economy, it allows the whole of society to advance in a spirit of solidarity, and it permits every persevering individual who reaches a high level of proficiency in a field of study to partake of the upward mobility built into the educational system. The difficulty at present is that this story of progress has given way to one of stagnation. On the one hand, recent graduates have discovered that successful degree completion does not guarantee a well remunerated job; on the other, political support for broad access to worthwhile post-secondary education for the middle and lower classes has eroded.

Second, let us note succinctly some broad features of life inside American academic communities. Among the numerous disquieting phenomena, five — all of which are heavily influenced by the cost structure — are particularly telling. (1.) An alarmingly high percentage of college students drop out without completing a 4-year degree.[10] (2.) A number of recent studies assert that academic progress by large numbers of post-secondary students is marginal and describe a degraded academic culture in which it is normal for students to spend too much time either working at jobs to support themselves or just loafing, and thus too

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[9] Claudia Goldin and Lawrence Katz, *The race between education and technology* (Cambridge: Harvard University Press, 2008).

[10] See William G. Bowen, Matthew M. Chingos and Michael S. McPherson, *Crossing the finish line: Completing college at America's public universities* (Princeton: Princeton University Press, 2009).

little time studying.[11] (3.) The teaching corps is increasingly casualised — that is, made up of contingent or part-time faculty working under demeaning conditions.[12] (4.) The restructuring of the professoriate dovetails with ever-narrowing specialisation in the ranks of advanced, tenured faculty, for whom scholarly achievement in their fields is crucial and the optimal, upper-level teaching assignment privileges their own research interests over students' needs.[13] (5.) In the middle and lower tiers of the system and in several important states, a broad retreat from affirmative action and equal opportunity has occurred.

THE CHALLENGE FOR THE ELITE

As little as three years ago, it was possible to extrapolate from this degraded picture of higher education in American society and in its own educational institutions the vision, imagined and then vigorously criticised by Frank Donoghue in the last chapter of *The last professors: The corporate university and the fate of the humanities,*[14] of liberal education surviving only at the top: it would be the province of the most prestigious and wealthy colleges and universities (perhaps fifty or so) that continue to dominate access to the corporate-and-political "power elite", to use Mills' dated but still apposite term.[15] In 2008 Donoghue's

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11 See, among others, Richard Arum and Josipa Roksa, *Academically adrift: Limited learning on college campuses* (Chicago: University of Chicago Press, 2011) and James E. Côté and Anton L. Allahar, *Lowering higher education: The rise of corporate universities and the fall of liberal education* (Toronto: University of Toronto Press, 2011).

12 Among many accounts of the decimated academic workplace and marketplace, the most compelling is the opening chapter of Marc Bousquet's, *How the university works: Higher education and the low-wage nation* (New York, New York University Press, 2008).

13 See Louis Menand, "Interdisciplinary and anxiety," in *The marketplace of ideas* (New York: Norton, 2010): 93-126.

14 Frank Donoghue, "Prestige and prestige envy" in *The last professors: The corporate university and the fate of the humanities* (New York: Fordham University Press, 2008): 111-137.

15 C. Wright Mills, *The power elite* (New York: Oxford University Press, 1956), especially chapter 12, "The power elite": 269.

task was to explain why the evanescence of liberal education and the humanities in the nation's public universities and a widened divide between them and the elite bastions of a different, conceptually *higher* education reserved for the socially, economically, technocratically privileged would be a grave misfortune for the United States of America. What has changed since then? In essence, as responses to the Great Recession have unfolded we have passed from the speculation of labour theorists attentive to globalisation, which Donoghue duly noted, to a struggle with grim realities: the employment-guaranteeing promise of higher education has collapsed even for the highly qualified graduates of the elite, research-oriented institutions supposedly fuelling the knowledge-based global economy that was expected to produce the intellectually demanding, gratifying, well-remunerated jobs of the future. As Paul Krugman wrote in his March 7th *New York Times* op-ed essay,[16] "technological progress is actually reducing the demand for highly educated workers". While high-level work in the professional and technological spheres is being automated by computerisation, the globalisation of higher education and especially of professional training programs is making the sophisticated positions of the so-called knowledge economy just as "off-shorable" as many manufacturing and service occupations have become over the past few decades. In sum, the elite itself — insofar as it is an intelligentsia that melds corporate, political, and educational forces — is vulnerable to the destabilising effects of under or unemployment. Its capacity to preside over and sustain the system of higher education is in doubt.

In *The global auction: The broken promises of education, jobs, and incomes,*[17] Phillip Brown, Hugh Lauder, and David Ashton subject the globalised marketplace for highly skilled, technologically sophisticated labour to the kind of extensive, empirical analysis that sociologist Richard Sennett carried out for the changing American workplace in the 1980s and 1990s.[18] The new economy depicted by Sennett calls for individuals capable of adjusting periodically to the swings of a global

16 Paul Krugman, "Degrees and dollars", *The New York Times* (7 March 2011): A21.
17 Phillip Brown, Hugh Lauder, and David Ashton, *The global auction: The broken promises of education, jobs, and incomes* (New York: Oxford University Press, 2011).
18 Among Richard Sennett's many compelling volumes, see especially *The culture of the new Capitalism* (New Haven: Yale University Press, 2006).

economy and constantly changing markets, of reshaping their identities as they navigate through a series of different careers, of coping confidently with instability. Brown, Lauder and Ashton go further, describing the emergence of a new global workforce made up of highly-skilled labourers willing to toil for low wages; their findings refute the conventional wisdom according to which more and better education is the key to economic success for both the individual and society. In any society, upward mobility through education can be undermined by a global auction that affords insecure employment to the lowest bidder; the employer-auctioneer takes advantage of the technologically enabled capacity to deploy cognitive labour anywhere and transmit its results everywhere instantaneously. The logic of the auction — one of relentless cost-cutting and downsizing that boosts profits by shedding jobs — spares no sector of an economy, no class of a society, no stratum of higher education.

So what does the spectre of unemployment for the well educated mean for the elite colleges and universities that are the preserves of liberal education? Does it mean something different for American and South African institutions and their societies, or is it likely to be a great leveller that subjects them to the same dynamics? If it is clear that the lot of graduates emerging from training programs with career-oriented credentials may not be stable, long-term employment in a profession or corporation or institution, can we still claim that the products of elite schools who enter the world with less focused vocational objectives but also with a liberal education and its multiple competencies are better prepared to deal with the turbulent socio-economic environment they are destined to confront? Perhaps. But in both a highly developed society like that of the United States of America and a developing one like that of South Africa, the main social and intellectual challenge for a beneficent educational elite seeking to preserve itself and the long-term viability of the system over which it presides has become more complicated. It is no longer merely to determine, collectively, how to maintain the modicum of upward mobility a democratic society requires of its educational system and how to rationalise the degree of unequal distribution of income it deems acceptable; it is also, increasingly, how to manage equitably the distribution of the high-level cognitive labour that is the university's core function. To confront the problem is to

consider a degree of regulation — of affirmative action for the public good — that hardly seems thinkable in the current American context, where the next few years seem likely to bring further retrenchment. We can only hope that the determined pursuit of affirmative action in South Africa's elite universities may eventually be recognised as an exemplary agenda of structural adjustment.

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SHAPING IDEAS:
THE VISUAL FORMING OF MEANING

By Bruce Arnott

A sculpture has been defined as — 'something you bump into when you stand back to look at a painting'. Nowadays the thing that you tread in when you step back to admire a sculpture might very well be a painting, or a print in the form of a frozen chicken or a chocolate body part. That is good. Such developments extend the boundaries of art.

Nevertheless that old definition of sculpture is more useful than one might suppose, because it emphasizes the qualities of 'solidity' and 'thingness' that still describe the essentials of the art form. It reminds us that sculpture is fundamentally concerned with mass (therefore with gravity), with volume (therefore with space), with the object (therefore with materiality and identity).

There have been some moralistic attacks on the commodification of the 'object', but art objects have not noticeably diminished. The fruits of trade still subvent our salaries.

It should also be remembered that we look to objects for clues to the origins of art. In the archaeological record, lumps of patterned ochre, or fragments of carved and incised mammoth ivory, are understood to hint at the ordering of the human mind, or the celebration of shamanic sorceries. These objects, classified by ethnographers as 'portables', are really proto-sculptures that possibly predate the diffused traditions of palaeolithic rock painting and engraving.

Present day readings of cave and rock art in Western Europe, and in Southern Africa (as elsewhere), indicate that the artists who made these works knew precisely what they were doing; that 'portable' and mural images were integral to ritual practice; and that they very likely mark attempts to resolve problems of consciousness and survival; to influence natural processes — even if only symbolically.

Studies of San social structures enumerate classes of shaman — including shamans of the game, shamans of the rain, shamans of the sick, shamans to propitiate the spirits of the dead. It must be assumed that these offices point to ancient practices that ease psychological survival. Many of the rock art images describing this material refer to trance-associated experiences; and were made with divinatory and prophetic purposes in mind.[1]

In the intellectual traditions of Western high art, where processes of art making are not primarily communal, there is less certainty about the societal functions of art than exists in the primitive model. There is a lingering sense of having lost the way. Robert Motherwell, for example, expressed the concern that it is more difficult for a modern artist to know what to make, than to know how to make it.[2]

There is a line of argument that suggests that, in Western Europe, the tradition of Romanesque sculpture was evidence of a healthy recovery from the barbarian depredations of the Dark Ages. That is, until the year 1260, when Nicola Pisano perversely shifted the paradigm by quoting Classical art in his marble pulpit for the Baptistry in Pisa.

This signalled the end of the anonymous medievalism of Romanesque and early Gothic sculpture; and the beginning of the self-conscious creative processes of Renaissance art — individualistic, intellectual and modern.

Unfortunately, the artistic flowering of the Renaissance did not give birth to significant developments in the language of form. In embracing the intellectual traditions of Greek classicism (including the notion of Man as the measure of all things), the sculptors of the Renaissance locked onto the habits of Classical representation — adopting an essentially idealised naturalism.

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1 David Lewis-Williams, *The mind in the cave* (London: Thames & Hudson, 2002): 133.

2 Robert Hughes, *The shock of the new: Art and the century of change* (London: BBC, 1980): 161.

Neoplatonism was the dominant philosophy in Europe from the third to the thirteenth centuries, and was revived in Italy in the fifteenth century.[3] This doctrine ascribed moral value to beauty, and therefore significantly encouraged the making of art. It also endorsed the notion of the supremacy of Classical ideals. The court of Lorenzo de Medici, the brilliant patron of Michelangelo, was particularly interested in the Platonic doctrine of Ideal Forms; the view that all things aspire to the perfection of ideal archetypes.

Plato distinguished between 'relative' and 'absolute' form. He saw *relative* form as "form whose beauty is inherent in the nature of living things"; [4] and *absolute* form as shapes and abstractions (straight lines, curves, and the surfaces or solid forms), produced from the analysis of living things by geometrical means. This is also known as symbolic form.

Painters of the Renaissance tended to apply an understanding of both relative and absolute form in composing their works of art. The sculptors, however, may be seen to have persisted in the pursuit of classical form and content. As far as sculpture was concerned, therefore, the innovations of Nicola Pisano were intellectual and psychological — not formal. This bias persisted from the time of the Renaissance, through the stylistic developments of the Baroque and Rococo, to Neoclassicism and Romanticism — from the mid-thirteenth to the early twentieth centuries.

A 'modern' self-consciousness, that preferred subjective strategies to communal values, is revealed in the rugged individualism portrayed by Donatello's sculpture of the *condottiere Gattamelata* (1453), even though the work also looks back to the Middle Ages; Michelangelo's *Youthful Captive* (1534) introduces an eroticised emotional form that anticipates the Baroque energies of Bernini's *Apollo and Daphne* (1624), which in turn pre-shadows the elegant Neoclassical form and classical allusion

[3] Antony Flew, ed., *A Dictionary of Philosophy* (London: Pan Books; Macmillan, 1979): 227.

[4] Herbert Read, *The meaning of art* (Harmondsworth: Penguin; Faber & Faber, 1956): 46-47.

of Canova's *Paulina Borghese as Venus* (1807).

All of these works contribute, in one way or another, to the expressive abstract physicality of Rodin's *Walking Man*, completed in 1911.

For some centuries, then, the limits to stylistic innovation in sculptural form were set by Bernini's emotionalism on the one hand, and Canova's intellectualism on the other. Otherwise, the gaze remained fixed on Classical, Hellenistic and Roman models. Sculptures were made in rhetorical service to Church or State or as votives to a Moral Beauty.

Classical tradition still has an impact on our thinking. But if we look at the really big picture (30 000 BC to 300 AD), this episode in Western cultural history may be characterized as a brilliant but flawed deflection from a mainstream of artistic expression.

In Western Europe that mainstream might be described as art with roots in the pre-historic, pre-literate, ancient, tribal and folkloristic; pre-Classical and therefore pre-Christian.

It would include accomplished early works such as the marble Cycladic *Figure* from the Syros group, dated at about 2500 BC; and a Late Minoan *Goddess* of the thirteenth century BC, from Knossos in Crete. It would also embrace the archaic Greek traditions, the art of the Celts, and vestiges of these origins in Romanesque and early Gothic art.

All of these forms may be categorized as primitive - that is to say, both primordial and original (but certainly not inferior). They are concerned with the expression of group values, and they are characterized by a synthesis of relative and absolute form — an acknowledgement of natural form expressed in innate geometries (symbolic form), in which detail may be manipulated in the interests of the iconic.[5]

In broad terms, these qualities are common to widespread material cultures, including those of North America, South and Central

[5] Lewis-Williams, *The mind in the cave,* 204–207.

America, Australasia, Oceania, West and Central Africa; and (of particular interest) Southern Africa — particularly in the rock paintings and engravings of the San, and their antecedents.

These qualities are reflected in the structure of such works as this traditional West African mask from the Ivory Coast; and in the formal innovations and signifying detail of San images. These are objects and ideas that would not have met the needs of Florentine merchant princes, nor found a place in the political convolutions of the Counter Reformation, nor the rationalistic ethos of the Enlightenment. However, they did provide an antidote to the dead hand of Classical formalism in Western sculpture.

Van Gogh and Gauguin were largely responsible for recognizing a submerged mainstream of art. They discovered evidence of such a phenomenon in antiquarian and ethnographic artifacts and art objects that surfaced in France at the Paris World's Fair of 1889. In short, they were responsible for generating a wide enthusiasm for a 'pre-literate, "primitive" tribal antiquity",[6] for precisely those values that had been by-passed by revivals of Classical form. Their point of view became known as Primitivism.

Anthony Blunt described Primitivism, more broadly, as "an international taste, rooted in English romanticism, in the writings of Rousseau'", and in the doctrines of David's pupils'; a "revolution against civilization, stimulated in the second half of the 19th century by a growing dislike of industrialism". [7] He saw it as "the motive behind the medievalism of William Morris and Gauguin's move to Tahiti", that found a voice in Van Gogh's letters and Picasso's *Arte Joven*.

Pre-Cubist responses to primitive art are to be found at an Expressionist/post-Expressionist interface, in the work of Kirchner and Gauguin. Responses to African sculpture in particular, were

[6] Hughes, *The shock of the new,* 259.
[7] Anthony Blunt & Phoebe Pool, *Picasso: the formative years* (London: Studio, 1962).

reflected in robust execution, a degree of abstraction and the use of emotional colour and form. Cubist and post-Cubist painting, collage and sculpture reveal less sentimental responses to Primitivism, a more intellectual analysis of structure and creative process, and an unapologetic appropriation of stylistic detail.

John Golding explains that Picasso initially responded to the rational qualities of certain African sculptures — particularly geometrical abstraction. This is reflected in works such as *Head of a man*, which he made in 1930, in collaboration with Gonzalez, while his *Woman carrying a child* (1953), demonstrates an understanding that 'ultimately the process of creation is one of intuitively balancing formal elements; [that] in the case of the most abstract sculpture, the finished product has the quality not of representation but a symbol — a re-creation rather than a reinterpretation". [8]

The subtle geometries of African art had a catalytic affect on European art, from 1905 onwards. As far as sculpture is concerned this is where rational form caught up with intellectual content, but without losing touch with feeling.

Brancusi's radical abstractions equalled Picasso's innovations. Works such as Brancusi's *Princess X* (1916) in polished bronze; or, the *Portrait of Nancy Cunard* of 1928, approach the perfection implicit in the Platonic notion of Ideal Form.

Subsequent developments in modern sculpture may be followed through the works of the likes of Jacques Lipchitz and Isamu Noguchi, in the evolution of a formalism that was rational, geometric and symbolic.

Israel (Lippy) Lipshitz, who taught sculpture at the Michaelis from 1950 to 1968,[9] was an important link to this ethos. He studied in Paris

[8] John Golding, *Cubism: A history and an analysis, 1907-1914* (London: Faber & Faber, 1959): 59.

[9] Bruce Arnott, *Lippy Lipshitz. A biographical commentary and documentation of the years 1903-1968, with a catalogue raisonné of sculptures* (Cape Town: AA Balkema, 1969).

under Antoine Bourdelle, the leading pupil of Rodin; he was directly influenced by the Postcubist work of Ossip Zadkine; and he was inspired by the spirit of Primitivism that was still prevalent in the School of Paris in the late 1920s.

It should be noted that, in later developments, the Figure shares the stage with the Ambiguous Object (favoured by Dadaists and Surrealists such as Duchamp, Man Ray and Oppenheim); and that both figure and object were challenged by Non-objectivism and Conceptualism.

Ultimately this pluralism enriched the formal resources of modern sculpture in general. It led to the elegant constructivism of Caro, the ethically 'green' strategies of Joseph Beuys, and to Jeff Koons' sophisticated Pop.

Evolution in the visual arts is driven by heterodox and often iconoclastic impulses. These are not necessarily the iconoclasms that have the frenzied sculptor smashing a path through the park like a marauding Ostrogoth (although some of the soapstone objects in Kirstenbosch Gardens invite such attention). As civilized beings we remind ourselves that it is not necessary to physically eliminate offending images; that it is possible to defeat them by subtler strategies.

Satire, comedy and absurdism in Art are rooted in spontaneous acts of subversion of the authoritative text, or the orthodox point of view. Acts of seditious comedy occur throughout the history of theatre where buffoonery, comic dance and mimicry run counter to the core script — relieving or testing it (as in Greek 'new' comedy of the fourth century BC). This tendency occurs in other early art forms, to lesser but still significant degrees — as droll marginalia in medieval manuscripts, autonomous detail in Romanesque and Gothic stone carvings, in medieval mural and panel painting, and in graffiti daubed by painters, or scratched into walls by sculptors at Delphi or Pompeii.

In 1964 I came across an inscription in an Oxford pub: 'balls to Picasso'. It has probably since been enshrined in anthologies of mural art, but I like to think that I once stood before the original — a brittle

Oxonian gloss on Cubism. It records that Picasso put the lid on Classicism.

An inscription, 'There's a naartjie in our sosatie', on the wall of the Deanery in Orange Street in the mid-70s signalled the collapse of Empire. It encapsulates the political frustration and anger of the time. It also reminds us why anarchistic tendencies still lurk behind much contemporary art in South Africa.

Anarchism has a place in the dynamics of creative polemics. Although it might be the preserve of young poets and snake-oil salesmen, we must also be reminded that breaking rules is part of the fun of testing the bounds.

How important are innovation and originality? We can argue with the semiologists that every work of art is a 'text-like collection of signs'; that details are 'cultural messages'; and that 'style is coded culturally and historically'.

If we accept that it is "the notion of the 'original' that is perverse", that "all texts are 'copies' in an infinite regress, it follows that any single text is only a point of entry into all texts"; therefore that "the concept of 'originality' has been replaced by one of 'borrowings' or the meeting of texts".[10]

My own sculptures, for better or worse, are referentially complex. This comes from being an academic and an artist (but not, I hope, an academic artist). One is concerned with making fresh and meaningful metaphors, but as part of a continuum.

Reference is made to my own works on the assumption that all sculptures are 'points of entry' into the great sculptural megatext.

I made the sculpture, titled *Sphinx*, in 1977 (Figure 1). It is cast in bronze, and is 1.2 meters long. The work was commissioned by the late

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[10] Carl Goldstein, *Teaching art: Academies and schools from Vasari to Albers* (Cambridge: Cambridge University Press, 1996).

Jack Barnett, the architect of the Baxter Theatre, and is positioned as a fountainhead at the top of the ramp to the theatre's northern entrance. It alludes to classical Greek thought and to the enigmatic Theban *Sphinx,* whose riddle Oedipus famously answered.

Figure 1.[11]

The Baxter *Sphinx* did not evolve from any classical model, although human, leonine and winged forms have been abstracted. Its mood is essentially benign, whereas Classical sphinxes are often dramatic and threatening.

My large *Numinous Beast* (Figure 2) was commissioned to be cast in bronze for the SA National Gallery in 1979. It is 2.8 meters high, stands on a granite plinth, and faces the entrance to the Gallery. I made the first sketches for this work in December 1976.

[11] Bruce Arnott, *Sphinx*, bronze, University of Cape Town (1976-77).

Figure 2.[12]

The sculpture refers to San therianthropic imagery, in particular to a small painting of a karossed, antelope-headed figure on Whale Rock, at the foot of Mpongweni mountain in the South Eastern Drakensberg. With hindsight it is possible to speculate that the germinal image depicted a shaman-of-the-game; a "kaross-clad figure with an antelope-eared cap, whose function it was to entice animals towards the waiting hunters' bows".[13] Works such as this have led scholars to understand that form and content in San art often have metaphoric functions; that they are capable of holding complex meaning. But it was more the ritualistic undertones in an ambiguous confluence of human and animal attributes that inspired the *Numinous beast* — a subjective reading of the semiotics.

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[12] Bruce Arnott, *Numinous beast*, bronze, South African National Gallery (1976-79).

[13] David Lewis-Williams & T. A. Dowson, *Contested images: Diversity in Southern African rock art research* (Johannesburg: Witwatersrand University Press, 1994): 209.

My large bronze *Alma Mater* (or *Caryatid figure*) (Figure 3) was commissioned by the University of Cape Town, and installed in 1996. The sculpture is 2.88 meters high, mounted on a column 6.4 meters high, and located outside the Kramer building on the Middle Campus. The fact that the sculpture was made for the Faculty of Education and now guards the Faculty of Law is only mildly confusing.

Figure 3.[14]

[14] Bruce Arnott, *Alma Mater*, bronze, University of Cape Town (1996).

This work alludes to the caryatid figures that support the entablature of the *Erechtheion* on the Acropolis in Athens. Originally an Ionic temple (built between 421 and 405 BC), the *Erechtheion* became a church in the 7th century, and was occupied by the harem of the Turkish commandant during the Ottoman occupation in the 15th century. The caryatid porch is itself probably a reference to the Archaic period, when female figures had been used as columns in Delphi.[15] This architectural conceit points to the interdependence of systems, and historic continuity – the contemporary concern of the *Alma Mater* sculpture.

The formal language of the bronze caryatid is one in which a volumetric geometry replaces the linearity of the marble caryatids. The sculptural mood of *Alma Mater* (as suggested also by the fragment of entablature) reflects Doric sobriety rather than Ionic elegance.

However, rhetoric is strategically destabilised by the inclusion in the composition of two chameleons that "provide a counter drama to the stasis and solemnity of the figure".[16] One chameleon is perched on the apex of the sculpture, the other moves up the column, tying this supporting element to the whole. These details challenge the ruling order of the composition — and allude to change.

Titled *Swansong of the sausage dog* (Figures 4 & 5), this small work (38 cm high), was commissioned by the University of the Witwatersrand about 1990. It is included in the collections of the university's Gertrude Posel Gallery.

I modelled the sculpture directly in wax, for casting in bronze. It depicts an enigmatic top-hatted figure jumping a sausage-dog through an impossibly high hoop, a knife and fork held ominously behind his back (figure 5). The work is absurd and obsessive.

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15 Christopher Mee and Antony Spawforth, *Greece, an Oxford Archaeological Guide* (Oxford: Oxford University Press, 2001): 52-53.

16 Bruce Arnott, *Artworks in progress: The yearbook of the staff of the Michaelis School of Fine Art,* 5 (Cape Town: Michaelis School of Fine Art, University of Cape Town, 1998): 3.

Figures 4 & 5.[17]

My sculpture acknowledges some of the formalisms of Daumier's (1850) figurine of *Ratapoil*; the geriatric dandy of the French Comedy in top hat and frock coat. This small bronze sculpture, also modelled directly in the wax, has a fluent expressionistic style that anticipates the work of both Rodin and Medardo Rosso (1858-1928). Daumier's humorous intentions are as craftily delineated in the round as in any of his lithographic caricatures. He also looks back to the drawings of Callot.

Trickster (Figure 6) is a bronze sculpture, 1.4 meters high, mounted on a granite plinth 84 cm high. I made this work for the Department of Psychology at UCT in 1987. It was originally sited in the foyer of the

[17] Bruce Arnott, *Swansong of the sausage dog* [front and back views](1990), bronze, University of the Witwatersrand.

P.D. Hahn building, but was relocated to the courtyard of the Graduate School in Humanities when the department moved in 2001.

This sculpture is linked to a series of *Punch* sculptures. Like the previous piece, it acknowledges the Italian and French Comedies, Callot and Daumier.

The *Trickster* makes specific reference to Alfred Jarry's (appropriated) Ubu character; and to the 'psycho-sexual fantasy of mechanical power', in his absurdist novella *Supermâle,* published in 1902. In that narrative the 'Superman'[18] falls in love with an electric chair – the only device that can satisfy his passions. Jarry's works influenced the Dadaists and the Surrealists, notably Picabia and Duchamp.

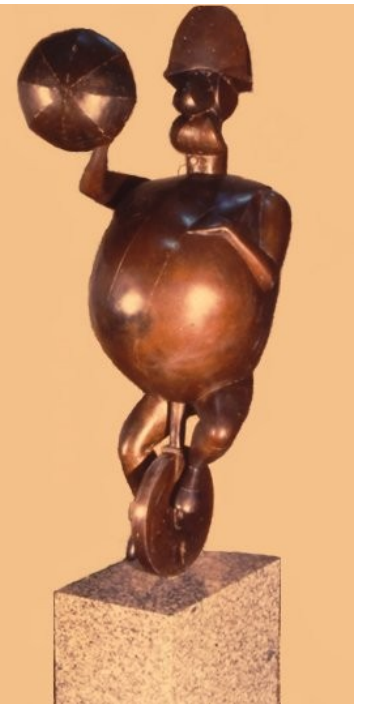


Figure 6.[19]

[18] Hughes, *The shock of the new*, 51.
[19] Bruce Arnott, *Trickster*, bronze, University of Cape Town (1987).

Cyril Connolly wrote that "Ubu's appeal, like Mr Punch's, is universal, he is the Id in action".[20] My *Trickster* sculpture looked to gloss the ambiguous symbolisms of *Ubu* and the *Supermâle*; the quaint monocycle and ineffectual weapon propose to subvert Jarry's proto-Futurism. The *Trickster* as anti-hero flirts with the monstrous Ubu/Punch.

I remember a wonderful production of *King Ubu* at the Little Theatre in the late 60s; the indelible image — *Ubu*, the butcher, swathed in sausages.

Citizen (Figure 7) is a monumental bronze sculpture, 2.25 meters high, mounted on a stone-clad plinth. It is sited at the entrance to the Johannesburg Art Gallery in Joubert Park. My maquette for this work was an award winning entry to the Johannesburg Centenary Sculpture competition in 1985.

Figure 7.[21]

[20] Cyril Connolly, *The Modern Movement* (London: André Deutsch; Hamish Hamilton, 1965): 22-23.
[21] Bruce Arnott, *Citizen*, bronze, Johannesburg Art Gallery (1978).

The sculpture is an ironic gloss on the *genre* of the heroic monumental statue — in part a response to the paternalism of Anton van Wouw's *Kruger* in Pretoria.

Citizen wears a bowler hat, a morning coat, and a rosette in his lapel. He flourishes his cane and carries a rolled copy of the *Financial Times* under his arm. These are attributes of entrepreneurial power. The figure strides confidently into the future, a tank-like image with rifling on his cigar. *Citizen* is a modern day *condottiere*, without a horse.

In pursuing that simile, it was tempting to quote Verrochio's *Colleoni* of 1467, but it is too ripely Renaissance for my theme. And, in fact, it has roots in an earlier, distinctly more primitive work of art, Paolo Uccello's *Hawkwood* made in 1436. This 7 meter high fresco, painted by Uccello in the Cathedral in Florence, is a commemorative monument to Sir John Hawkwood, an English professional soldier formerly in the hire of the state. James Beck notes that the painting "is not so much a portrait of a warrior as a portrait of an imagined bronze monument", and that "the *Hawkwood* survives as a powerful image in which Uccello's perspectival interests are united with ideas about reality". [22] In citing the Uccello *Hawkwood* my intention is to draw attention to a consummate sculpture encoded in painterly conceits, and to the juicy ironies that can attend the practice of making Art about Art.

Soon after the installation of the *Citizen,* I was informed that the sculpture had elicited an unhappy response from the politicos at Shell House, just up the road. "Come the revolution," they muttered, "that sculpture will be the first thing to go!" They had, it seems, missed the point.

The sculpture is still there, nearly twenty years later. The bronze has acquired a patina of grilled sausage from the street vendors encamped at its feet. The solid brass cane has been regularly liberated by the scrap-metal collectors, and carefully restored by the Gallery, in a reciprocal exchange of wealth and culture that suggests a subliminal understanding of some of its precepts. Perhaps the good spin-doctor*s*

[22] John Beck, *Italian Renaissance painting* (Köln: Kröneman, 1999): 87.

have come to admire mercenary daring; and now emulate the merchant princes of Italy - those wily patrons of the Arts.

Plato was disinclined to admit artists to his ideal Republic. Apparently he doubted that art could 'embody and communicate knowledge and truth'.[23] That might have been valid in an age of Postpericlean rhetoric. If we turn to the primitives, however, it is evident that symbolic form can hold and impart profound meaning. *Their* lesson is that the making of art is a celebration of the imagination - a moral, and far from frivolous pursuit.

BRUCE MURRAY ARNOTT, sculptor, was born in Highflats, Kwa-Zulu-Natal and studied at Michaelis School of Fine Art (University of Cape Town) and the Courtauld Institute of Art (London). He worked at the South African National Gallery as Assistant Director and taught at the University of Cape Town where he was a Professor of Fine Art, Director of the Michaelis School of Fine Art, and is a University Life Fellow and Emeritus Professor. He is interested in Western and African art and has published and exhibited mainly in South Africa.

[23] Flew, *A Dictionary of Philosophy*, 6.

LAUDATIO:
A MOST REMARKABLE MAN

By Lynda Baroness Chalker of Wallasey

Most who write about Stuart will have known him far longer than I have, but ours has been a constant and enduring link since I was first taken to the University of Cape Town in 1987. My first and lasting image of Stuart is his proud defiance while leading UCT students in one of the many anti-apartheid marches. Of course he did so much more than march. He was once described to me by a person of note, not known for his swearing, as that b*** UCT Professor. Stuart campaigned long and hard for the ending of apartheid, and also for the needs of all his students, as well as for reforms in medicine and its teaching, for which so many have reason to be grateful.

For those of us from overseas, Stuart was the quiet dependable voice of reason, the well informed and highly committed academic who could always be relied upon to give advice and guidance for those who might not be up to date with the latest twists and turns of SA politics. Many ambassadors have real reason to be grateful for his guidance as well as this United Kingdom Minister for Africa. He never shied away from the difficult questions, and his advice was often used although he was by no means always acknowledged for it. That would have been much too embarrassing.

Since I left office I have had the wonderful benefit of being treated as a very dear personal friend, and the dinners which Anita and Stuart have treated us to have always been memorable for Stuart's humour and story telling, to say nothing of his skills as the Sommelier.

Stuart continues to be indefatigable as a money raiser for UCT, although we have to allow him more rest and time with Anita as the years go on. But the United Kingdom end of the UCT Trust will always be grateful to him as the constant reminder of all that has been the best in a UCT Professor and Vice Chancellor. My greatest personal joy of late was his presence, despite the high temperature outside, at

the conferment of my Honorary Doctorate of laws in December 2010 in Jameson Hall.

Stuart has been a fine Professor of Medicine, and outstanding Vice-Chancellor, a remarkable advocate for UCT students in all disciplines, a wise counsellor and one of the greatest ambassadors for South Africa, using his common sense and valuable ability to debate to win over people of all races, in many countries and under amazing pressure.

BARONESS LYNDA CHALKER OF WALLASEY served as Member of Parliament for Wallasey for eighteen years, as the United Kingdom Minister for Africa for almost twelve and as Minister for Development for eight. She formed her own consultancy company fourteen years ago and now advises governments and businesses on investments in Africa. She considers herself fortunate to be a friend of Stuart and Anita Saunders. As a Member of the United Kingdom Trust for the University of Cape Town, she takes an active interest in developing different aspects of university work, whether in engineering or finding medical cures for neglected tropical diseases. She is often known across the continent as 'Mama Africa'.

A SHORT BIOGRAPHY OF DR. STUART SAUNDERS

Stuart John Saunders was born in Cape Town, South Africa, on 28th August 1931. After graduating MBChB with honours in 1953 at the University of Cape Town, he did post-graduate research at the Royal Postgraduate Medical School at Hammersmith in London and at Harvard University. He received the degree of Doctor of Medicine in 1965 (University of Cape Town). He began his administrative career as the University of Cape Town's Head of the Department of Medicine (1971-1980) and was co-founder of the university's Liver Clinic & Liver Research Unit (a field in which he wrote some two hundred articles and co-authored a study that has become a classical reference). He was Vice-Chancellor from January 1981 to August 1996.

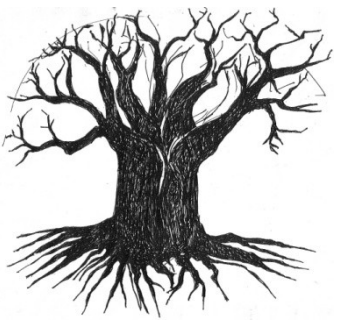
Dr. Saunders is the recipient of many an honorary degree, among them doctorates from the universities of Sheffield, Aberdeen and Rhodes and LLDs from Princeton, Toronto and Cape Town. He is Fellow of the College of Physicians of South Africa, the Royal Society of South Africa and of the Royal College of Physicians London.

He is a trustee of the Claude Leon Foundation, the Fox Foundation and the Webb Trust. He is a past trustee and chair of the Friends of Valkenburg (the psychiatry teaching hospital of the University of Cape Town), a trustee of the University of Cape Town Trust in the United Kingdom and a past Fulbright Commissioner (Chair 2000). He was president of Convocation (University of Cape Town, 1998-2011). He was a founder and chairman of TENET (Tertiary Education Network) until 2007, a not-for–profit company which pioneered higher education digital connectivity. He served on the National Working Group established by the Minister of Education to look at the restructuring of Higher Education (2001), on the Advisory Council for National Orders (2002–2005) and on the Council for Higher Education (2002–2010, deputy chair 2008–2010). He is a Senior Advisor to the Andrew W. Mellon Foundation (New York).

He is credited for putting an end to the racially segregated training of medical registrars and for admitting students of all races to the University of Cape Town's residences; for refusing to bend to the will of the apartheid State; for initiating fund raising among South African universities so as to ensure their academic freedom and meaningful service to science and to the "rainbow nation".

His steering of the medical profession and of his University under apartheid has been recounted in his autobiography, *Vice-Chancellor on a tightrope*.[1] He famously resigned from the South African Medical Association as they failed to take action against the district surgeons responsible for treating Steve Biko at the time of his capture and murder by apartheid operatives.

The Order of the Baobab (Grand Counsellor, Silver Class), a prestigious South African non-military honour, was bestowed upon him in 2002.



[1] Stuart Saunders, *Vice-Chancellor on a tightrope: A personal account of climatic years in South Africa* (Cape Town: David Philip, 2000).

THE ELEPHANT AND THE OBELISK

About the Special Series and Imprint of the African Yearbook of Rhetoric

In the fantastical imagination Europe holds of Africa the Elephant and the Obelisk have an enduring presence. During the Renaissance their images lent an African presence to the culture of emblems, not much different in purpose and means from the modern obsession with branding logos supposed to encapsulate a corporation's ethics beyond selling goods. In rhetoric (of which emblems were the visual analogue) the Elephant spoke to the virtue of memory and the prudential value attached to formulating forward-looking arguments heeding past lessons. The Obelisk, not unlike Neptune's trident, emblematised the penetration of wit – a point driven home by its engraved hieroglyphs. Memory and intelligence, prudence and projection, sure footedness and quick sharpness – the Elephant carrying the Obelisk on its back told a telling tale about the distanced virtue European high culture, at the very time of Portuguese descobrimentos, attributed to a continent, Africa, which had always been part of it, in reality or in imagination. Africa has often afforded Western minds an occasion to reflect.