BILL ARKIN
beta 125 & 126

ANTONELLO: WHAT IS THE TECHNOLOGICAL DIFFERENCE BETWEEN THE GULF WAR AND THE
VIETNAM WAR???

Well, of course we don't know what won the Gulf war and to some degree we don't
know what lost the Vietnam war. ANd in many ways the comparison is quite
unfair. But what won the Gulf war at least so far, in terms of what we can see
is the integration of all of the systems that were in the region. That in some
way the Gulf war was an opportunity to finally see the computers and electronics
and modern weapons and smart bombs all integrated into a whole. Now to some
degree that's a technological phenomenon but to some degree its a political
phenomenon. And making that separation is very difficult to do because I think
we often mistake what are political achievements, that is a blank check that
went into the employment of an overwhelming political force in the Gulf as being
a technological phenomenon rather than a political phenomenon. That's one
answer. I think the other answer about winning the Gulf war is a more complex
one about the difference between the US its allies and Iraq. In many ways the
US found itself in a transition point between old style warfare and new style
warfare. That is to say that in the Gulf war we were relying upon not brute
force, not the grinding steel of ground warfare that we experienced....

For the US the Gulf war represented a transition point between an old style of
warfare and the modern generation. And to some degree the transition was the
transition between the brute force that we associate with WWII. The brute force
of grinding armor and steel and tanks with the victorious weapons that we
observed in this war which were aircraft and electronics and smartbombs. Now I
wouldn't want to make too much of it on a certain level but on another level,
Iraq fought the last war prepared with these defenses and these tanks to have a
grinding ground battle. And the US fought the next war totally leapfrogging
over these Iraqii defenses and disrupting the Iraqi defense through its
electronic warfare and its electronic means. And so in many ways we observed,
maybe not unalterably so, but we observed the cutting edge of this transition
from the era of mass warfare to the next era and era of electronic warfare. And
I think its something which will influence the design of military forces and the
production of military material in most countries now and into the future.

Even in the Soviet Union I think we see the reality which is we are starting to
hear voices all of a sudden speaking about the need for professional military
and for greater investment in high technology. So the whole idea of the very
basis of the Red army which was the big fear of the whole post-war era, mass of
armor and the mass of soldiers has evaporated. Because what was observed in
this was was that mass was no longer what brings the most successful military
activity. That in this war it was the precise destruction through smart weapons
and through electronic warfare that brought military victory. And so all the
armies around the world that depend upon mass that depend upon large amounts of
soldiers and huge arsenals of tanks and artillery, are now having to look at
this war and say, "Is this way we can defend ourselves in the future?"

BILL ARKIN

ANTONELLO: THERE WERE A HALF MILLION SOLDIERS IN THE GULF...

Well, I think that one thing we should understand about the Gulf war is that it
surprised the military the US military as much as it surprised the public.
That, I don't think anyone sat in the Pentagon in August and said to themselves,
"We're going to win the most lopsided military victory in history." I don't
think anyone said, "We only have to send airplanes and we don't need to worry
about having 12 divisions there." I don't think this was the thought. But the
reality is, that as the modern military means were integrated into one whole it
had such an impact on Iraq that the presence of 12 divisions and all of this

massed armor and all of this quarter of a million army troops and marines and
divisions from other allied countries were really, they were secondary. And the
time the ground war was initiated on the 24th of February, the war was already
won. So in many ways this was just an operation to placate the army and the
marine corps. An operation, if you will to placate the collective spirit of the
public which couldn't understand that the air operation was war.

If you remember during the war, people used to say, "the air campaign and the
ground war" And we used to speak in the media as if, Well now we're doing this
air bombardment but, the war is going to start soon. And people couldn't quite
understand that we were defeating Iraq and winning the war before ground forces
were ever involved in the conflict. In our own mentality it was hard to adjust
ourselves to this new reality. And the new reality was that air war was real
war. And that ground war was just a component of the real war but that it
wasn't the only real war. And if the air war hadn't been so successful, the
ground war would have been the bloody mess that people had predicted that it was
going to be. So in my mind, its not a question of saying, there were half a
million soldiers on one side a million on the other. One of the largest
concentrations of military forces ever and then say well this is just war like
any other war. How can you have war like any other war when the ratio of dead
soldiers is 1000 to 1. I don't see how you can call that any war. We've never
had a war like that.

BILL ARKIN

ANTONELLO: THE GULF WAR WAS A WAR WITHOUT AN ENEMY...

WEll I think that the war ended up being driven by logistics, by how much
ordinance airplanes could deliver safely without crowding up and bumping into
each other in very crowded air space. But again we should not mistake the end
result of the war with what the military believed when it went into the war.
They didn't know that they were going to win so well. It wasn't clear that
Saddam Hussein was going to make all the wrong choices. So this notion in some
way that this was intended to be target practice, that this was intended to be
just a military exercise was false. There were 35,000 doctors and medical
corpmen amongst those half a million troops. 35,000 because they expected
thousands, tens of thousands of casualties on our side. And I think that you
can't forget that. That one of the things that you must remember about war when
you think about it is that as Eisenhower once said, "Every war is going to
astonish you." And this one was no different. Now of course in the end, Iraq
didn't perform very well militarily. And the question that will be the big
debate in the future will be, "is that because we were so great or they were so
bad?" And I don't think the answer is clear yet. But if you can imagine what
it takes in a day to day setting in a bank for instance to count all the money
with an adding machine. Or even without an adding machine, with a piece of
paper and a pencil physically calculating large numbers and what its like to do
that same job with computers, where the data is constantly being updated. No
one even spends their time counting because its done automatically. And then
you multiply that by thousands. This is the difference between the type of war
we used to fight and the type of war we fought here. That our whole society and
hence our military has become so automated that the process by which we were
able to communicate, to integrate our weapons, to fight as an integrated force
was something that Iraq had never experienced before. And that feature of this
war is really something that you could say is responsible for the overwhelming
and lopsided victory.

BILL ARKIN

ANTONELLO: WILL THE MILITARY INDUSTRIAL COMPLEX BE STRENGTHENED BY THE GULF
WAR????

In thinking about the effect of the war on the future, you can look at it in one
of two ways. You can conclude on the one hand that had we lost, had the systems

not performed very well there would have been a lot of clamoring and arguments made that we need to spend more money on defense, we need to improve our research and development and clean up the defense department and find a new way of doing things. Or you can argue that because we were so victorious that the Pentagon will be regarded so highly that it will be able to say, "because we were so victorious we need to spend more money on defense, we need to have more research and development, we need to be able to repeat this tomorrow". And really neither is happening. The fact of the matter is that the Defense Department is going to have to reduce its budget by some 25% over the next 5 years.

And this war is really having little impact on this reality of the end of the Cold War. And in many ways the end of the cold war allowed this war to happen. The movement of so many forces from Europe to Saudia Arabia, the ability to take the ammunition out of Germany, and to take the armored divisions out of Germany, and to move all of these airplanes to the region occurred because the cold war was over. So, I don't particularly think we're going to see a renaissance of spending on military research and development. And in many ways people will argue that technologically we were so far ahead of the 4th largest army in the world, remember, we called Iraq that, we were so far ahead of this 3rd world worst case, that what do we need to spend more money on? Why do we need to develop the next generation of weapons? That maybe we can have a bit of a pause. And let the dust settle before we decide where we're going. And that's already happening.

The B-2 Bomber has been the perfect example. This is in most people's minds, this is the sexiest new bomber to arrive in decades. And yet its running into trouble. Its not being supported on its looks alone. Its receiving an inordinate amount of political attention. And I think its because people know in their head that maybe the military that we have is good enough. And if people felt more insecure about that point, if people felt more steady and unsafe about that point, than they might be willing to write more checks to the Pentagon and see research and development accelerated. But they don't think that.

BILL ARKIN

ANTONELLO:

We are not in the cold war anymore. And the fact is that after the WWII whether the Soviet threat was real or manufactured there was a challenge to US dominance after the war. And there is no challenge now, not militarily. And in an ironic way, the challenges which do exist to the US, hegemonic controls of the world, economic challenges, are ones which people perceive are undermined by military spending. So I don't think that the pattern of the cold war is necessarily going to repeat itself. If we had just fought a war in Korea, if we had just fought a war in some secondary place, then maybe the end result would have been that the Pentagon would say Iraq is next. But in an ironic way the worst case that they could produce in their threat shopping was who we ended up fighting the war against. And they were defeated militarily that its very difficult for anyone to argue with a straight face that there is some new threat looming over the horizon that demands the kind of permanent militarization that we saw after the 2nd WW.

That era is over. And this war in many ways proves that it is a professional military. That it is the application of modern technology, that it is the joint operations of military forces integrated with computers and electronics, that is the future. Not some mass production, some mass investment that also serves at the same time to undermine the economic health of the society.

BILL ARKIN

ANTONELLO: SCIENCE AND TECHNOLOGY IS MORE AND MORE IMPORTANT FOR THE FUTURE....

I think that we see in this war that the integration of technology and its
usefulness to the soldier has really reached a new pinnacle, a new height. And
to some degree its something that people should understand in their day to day
lives. Don't you remember the first computer you touched and it was like a
foreign language, and it was so complicated. And in over a year really, in less
than a decade we introduced the whole concept of user friendly. And now you
turn on the computer and press a few buttons and its like, its like you've been
speaking this language from birth. And I think that's what happened in the
military. That they transitioned as well from their initial use of these high
technologies to the day when they were truly integrated into the mentality of
the individual soldiers. And it was just a matter of these soldiers being well
trained and motivated to use a technology that was as simple and as reliable as
a personal computer or bank machine or all of these things that are so common in
our society today.

BILL ARKIN

ANTONELLO: IS TECHNOLOGY SHAPING THE SOCIETY??

Well, obviously technology always contributes to what our society looks like.
The question is what is it going to look like in the future. What influence
will this war and the military in general have on our technology, have on our
society? In the 1940's and the 1950's when permanent militarism was something
that was being sold to our society, during the early years of the Cold WAr, the
air force which was the new force that emerged from the 2nd WW, spent a lot of
time and energy trying to convince the public that its weapons and its research
had spinoffs. So we hear all of the space programs, teflon, and computers, all
of this comes from this investment. And that argument is really not made
anymore because the fact of the matter is that the idea of permanent militarism
in our society is now well entrenched, it is an integral part of our society.
Whether you live in the US or you live in Switzerland or you live in the Soviet
Union, the notion that there is a permanent military even after the Cold War is
really not challenged by anyone. So the technology goes with it. It is more an
integrated part of civil military culture rather than the military asserting
that it is the custodian of high technology and that civil society depends on
its investment in the military in order to be high technology. And I think that
day is gone when everyone in our modern industrialized countries can have a
personal computer or their own video game for that matter, than the military no
longer owns the technology. The technology is now spread throughout our society
in such a way that it no longer has the control over how the society sees the
technology.

BILL ARKIN

ANTONELLO: OUR GENERATION BELIEVED IN TECHNOLOGY AND THE NEW GENERATION DOES NOT
BELIEVE IN TECHNOLOGY??

Well, after the 2nd WW we entered the nuclear age. And certainly one of the
attributes of the nuclear age was the importance of nuclear weapons. And to
some degree, because nuclear weapons were so different they provoked a feeling
that what was modern was nuclear and what was nuclear was the solution. And
from that, I think, came this notion in our society of the technological fix.
That is that if there was a problem, science and technology could solve it. And
nuclear weapons and the nuclear age sort of represented where we found ourselves
in the 40's and 50's. And I think that this more or less prevailed through the
70's. But something happened in the 70's, I think it started with the Vietnam
war where the reality was the technology wasn't capable of assuring the victory.
That the promise both of nuclear weapons in specific and the technological fix
in general didn't pan out. And then, I think, following up on the Vietnam war,
Watergate which was the first real challenge to the idea of govt competence and
govt infallibility in the US made a new generation of people see that technology
and govt was no longer about a process by which you believed that some other

entity, the generals or the scientists, knew everything and had all the solutions. But more that the scientists were incompetent and that the govt didn't know what it was doing. And this is the generation I grew up in. I didn't grow up with fear of the bomb or in awe of the bomb. I grew up looking at an incompetent, bumbling, evil govt and from that came three mile island and Chernobyl and the Challenger space shuttle and all of these things that constantly reminded us that technologies broke down. And that the promises of the scientists that nothing can go wrong never came true. And so in many ways I think society transitioned from this love affair with the bomb, with nuclear, to this scepticism about technology and that has had a bigger impact, if you will, in bringing technology down to size. In making it more something which is no longer to be put on a pedestal, but something which is just a part of society, a part of our day to day lives.

The Gulf War in many ways challenges that notion. Except that the military in many ways found itself having to describe its accomplishment in civilian terms. This was the video war. Now why did the military say it was the video war? Why was it important for them to get across that it was the video war? Its because its a civil product that people can understand. Its user friendly in a way, if you will. That the military tried to meld into the civil society and explaining its smart weapons and its accomplishments. So rather than once again the military sort of moving forward separating itself from society, the way nuclear weapons served to separate the military from society after the 2nd WW. What we saw instead was that the military desired to blend into society not to separate from society. And I think it shows that what the military fears more than anything else is its continuous reputation as incompetent. And its and the idea that it is a part of the evil incompetent image of govt and science which grew in the 70's and the 80's.

BILL ARKIN

ANTONELLO: DO YOU THINK ELECTRONIC TECHNOLOGY IS GOING TO GIVE MORE FREEDOM TO PEOPLE???

Well, one of the prices that unfortunately we have to pay in our society because of the nature of the Gulf War is an image that war is cost free. That even though 200,000 Iraqiis have died this is not the dominant image that exists in our society. In our society its victory parades and a few hundred allied soldiers losing their lives. In many ways this bastardizes and manipulates the end result of what war means. But maybe I'm too much of an optimist but, I don't think that the military is an evil institution. I think that the military has an evil job. And I think that there is a link between the military and the public. And that link is dependent upon believing that there is some just war, that there is some justice. And where that comes from is in the notion that combatants and noncombatants can be separated. That military and civilian can be separated. And I think in the Iraq war the large number of Iraqii casualties and the profound impact that our bombing had on civil society in Iraq demonstrates in some way that this separation in modern society is not so easy. So that even in the desert of Saudia Arabia, Iraq and Kuwait, in the perfect battle field, with hundreds of miles of open space, where it was very sparsely populated. I mean really the perfect battle field in the military's mind, hundreds of thousands of Iraqiis still died. And the boundaries of the battle field couldn't be so easily contained. That Bagdad and Bassora and Kuwait City and Mosul and Kirkud had to be brought in. And civilians died in large numbers.

And I think what this shows and I think that there are people in the military who know this, who recognize this, is that there is no clear boundary between the military and the civilian society. Even here. And ultimately that means that the waging of war becomes more and more circumscribed. It becomes more and more controlled. And that the technology didn't stop the effects of this war from spreading over a large area. So while the technology might have a achieved a tremendous lopsided, military victory the effects of that technology were as

great if not greater in some ways than the technology that was employed in
previous wars.

BILL ARKIN

ANTONELLO: WHAT WERE THE ENVIRONMENTAL CONSEQUENCES????

It seems that we're at a point in our society where we're becoming so
interdependent and where our reliance upon natural resources are stretched so
thin that it's very difficult to have a major disruption in our society, a major
ecological disruption, military disruption, or a man made disruption that
doesn't have a reverberating effect. It wasn't coincidental that when this war
was looming this winter, before it began. That the newspapers were filled with
the environmental effects of the war. I don't think that was coincidental at
all. People knew if this war was fought that it was going to have grave
environmental effects. I think people knew that. And in some way now in our
society, when any major disruption occurs, it has a huge impact on other aspects
of our society and the way it lives. I mean the Mount Pinatubo in the
Philippines. You know this volcano happened and it's not just affecting the
island of Luzon. You know the aircraft, commercial airliners have to go around
the clouds of soot in order to just do their routine flights. And that might
seem like a minor thing. But, my point is to say that our society is so tightly
interdependent and our relationship with nature is so much more integrated that
rather than our, more and more through technology isolating ourselves from
nature. We seem to become more and more dependent upon and more and more linked
to nature. So in this war, through the oil fires and oil spills, throughout the
striking of the nuclear reactors, through the pollution that has been caused by
the open sewage systems and the Tigris river and the Shat el Awra, it seems to
me through the destruction of the desert environment and through these thousands
of tanks and mines and fortifications, that people increasingly see that you
cannot fight a war, you cannot have such a major disruption of our society
without it having a severe and long-term impact on nature and on our quality of
life overall.

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ANTONELL0:   WHAT IS YOUR IDEA OF PROGRESS???

Well, progress is a human quality. Its not a technological phenomenon. Maybe
to some degree in the events of 1991 we learned that its very difficult to gauge
when it is that things that go wrong began. When did the war against Iraq
begin? Did it begin on August 2nd? Or in some way did it begin way before
August 2nd? In the disparity of wealth between Iraq and Kuwait. Or in the
decisions that were made during the 1980's of arming countries with surplus
money to the teeth? Or did it begin even sometime earlier than that? It's a
difficult question to answer, when the war began. But in trying to understand
that question it seems to me that we always come back to the human condition
being the root cause. And I think as our society transitions from the nuclear
era in which the destruction of the planet was the dominant image to a human
era, as it transitions to a human era where failing human needs and dealing with
human rights and dealing with hunger and population and sickness that maybe the
real fix, the fix of the human condition, will have the influence over our
technologies that we need and demand.

In many ways the current concern about the environment about nature is the
transition from the nuclear era to the human era. Because in the 1980's as the
threat of nuclear war diminished the threat of global catastrophe from
environmental destruction emerged. People needed an apocalyptic image to
replace nuclear war. And so came global warming and ozone depletion and global
catastrophe through environmental damage. But I think it is only a transition
point to where people realize that in order to finally fix the environment, in
order to repair the ravages of the nuclear era that we have to put our emphasis
on human beings. If we do that if we're successful, than progress will mean no

more Iraqs because it won't be possible. It won't be possible for societies like Iraq to emerge. It won't be possible for these types of states to exist. Now maybe that's a very optimistic viewpoint. And maybe it has a very long calendar in front of it. But nonetheless, it seems, I feel that we have transitioned from one world to another since 1989. And the world that's in front of us is not a world where we will get on the technology space ship and transport ourselves to some other era. I think the world that is in front of us is a world in which technology will be increasingly utilized for human good and not just for the science fiction experiments of the military and the scientists.