(Walt Patterson joined Chatham House as an associate fellow in 1991. To mark his 25th anniversary at the Institute his colleagues organized a celebration that took place at Chatham House 19 September 2016. Walt gave this presentation.)

House of Stories

Shortly after I joined Chatham House as associate fellow, 25 years ago in 1991, I was at a conference in London. The chair of the session invited questions from the audience: 'Please state your name and affiliation'. I stuck up my hand. When he pointed to me I said 'Walt Patterson, Chatham House'. At least half a dozen heads jerked around and stared at me with startled expressions. In the ensuing months, this happened every time I asked a question at a conference. I understood the startled expressions. They meant 'Patterson? Whatthehell is he doing at Chatham House?'

I asked myself the same question. For some two previous decades I had thought of myself, willy-nilly, as a troublemaker. I had tangled with the nuclear industry, the electricity industry and successive governments, making myself persona non grata to the Atomic Energy Authority, British Nuclear Fuels, the Central Electricity Generating Board and the Department of Energy. What was I doing at Chatham House?

At the time I, like many others, thought of Chatham House as a bastion of 'the establishment', almost an arm of the government. I did have occasional tenuous contact; as far back as 1978 the Chatham House journal *International Affairs* even invited me to contribute a long book review on energy policy. But I never imagined for a moment, with my record as a troublemaker, perpetually making a nuisance of myself to various authorities, at odds with official thinking and planning, that I would ever be actually affiliated with such a quasi-official body as Chatham House.

Only much later, after I had become an associate fellow and was listening regularly to conversations in the cafeteria, did I gradually realize that - far from being quasi-official - Chatham House is actually a hotbed of radicals, radicals of every kind in every direction - people wanting not only to understand the world better, but also - often - wanting to change it for the better - 'better', of course, according to individual taste, and leading to some lively disputation.

Many times, when I'm working in other countries such as Romania or South Korea or indeed the United States, people ask me about Chatham House. I explain that it's the world's oldest independent policy research institute, founded by far-sighted British and Canadians in 1920, immediately after the first world war, as a sort of neutral ground, to help resolve differences and conflicts without slaughtering people. Nearly a century later that still stands as a reasonable description, at least for starters. But I've lately come to realize something else - something I think is important. Chatham House is a place for story-telling - a very special kind of story-telling.

To make sense of our world we humans tell ourselves and each other stories - stories about people and events, about how things happen and why, about those differences and conflicts that so affect us. We call the stories history, reportage, analysis, commentary - we ask 'What's the story?' Any story about reality is selective. You have to select the language and the concepts you use, and the

assumptions you make. You have to choose what to include and what to leave out. You can tell any story in different ways, with different implications and consequences. You can tell it as accurately as you can - or you can shape and fabricate it to fit your agenda.

For this story-telling, the essential role of Chatham House has long been quality control. According to its governing statute, Chatham House itself never takes a policy position. Any publication from Chatham House is the responsibility of the person or persons whose byline it carries. However, before any such publication reaches the public it will have gone through an internal and sometimes external review thorough enough to make it pretty well bullet-proof. When a story, no matter how controversial, carries the Chatham House imprint, you can be sure that it is accurate and well-founded in reality.

Story-telling was how I came to be at Chatham House. By a combination of circumstances I'll save for some other occasion, in the spring of 1991 I had just returned from my first trip to Romania, when I happened to have lunch with my old friend Jonathan Stern. Throughout the lunch I must have gone on and on about Romania. My late beloved wife Cleone and I had fallen in love with the country, its stunning beauty and its courageous people - kind, capable and hilariously funny. I was furious about the stories then filling the British press, in which Romania consisted entirely of rampaging miners and grisly orphanages - true stories, alas, but desperately one-sided and unfair to the many Romanians trying heroically to set their country straight again. I insisted that Romania deserved a better story.

Listening to me, Jonathan at last said - I paraphrase - 'Would you like to do something about it for Chatham House?' At the time Jonathan was both head of what was then called the Energy and Environment Programme, 'EEP', and also director of studies for the whole of Chatham House. Jonathan explained that he was inviting me to become an associate fellow in EEP, to set up a project on Romania, and in particular about Romanian energy. I was frankly dumfounded. But I accepted his invitation, and we set about trying to find funding for such a project.

That became another long and frustrating story. But I did eventually complete the project, with a book published in 1994 called *Rebuilding Romania: Energy, Efficiency and the Economic Transition.* As far as I know, the English edition sank without trace; no English readers were interested in a more upbeat story about Romania. The Romanian edition, however, sold out within six weeks.

Meanwhile, as associate fellow, I did what I could to help the then chair, Silvan Robinson, and senior research fellow Michael Grubb sort out an untidy succession when Jonathan moved on from the headship of the programme. At length, in May 1993, Michael was appointed head, and I applied for his vacated full-time position as senior research fellow. After the preceding confusion I knew the hiring process would be protracted. Then Michael called me into his office: 'Silvan and I have concluded that we won't find anyone better than you. If you want the job, it's yours.' It was the nicest thing anyone ever said to me. I went home and told Cleone 'At last, I've got a proper job!'

During my freelance years before Chatham House, I had spent a lot of time and effort trying to encourage the use of advanced technology for coal, such as fluidized-bed combustion and gasification. At Chatham House Silvan Robinson prompted me to look into the use of these technologies to produce biomass electricity, leading to a Chatham House report I called *Power From Plants*. By the mid-1990s, however, I had to conclude that coal producers had a time horizon of tomorrow afternoon. Their only interest was to sell the next cargo of coal. By that time, too, climate had become an issue all too serious to ignore, with coal as its worst offender. It was, for me,

the first inkling that our fundamental energy problem worldwide is combustion - that is, fire. But that took some time to sink in.

By that time I had at last realized that my various earlier preoccupations, with nuclear power, with coal, with so-called renewables, with energy use and efficiency, were all converging on a single story: electricity. The traditional electricity story, prevailing all over the world, was based on a technical and institutional model that had changed little for close to a century. Back in the 1970s my colleagues and I at Friends of the Earth, at the Open University, at the University of Sussex and elsewhere, had begun to raise questions about traditional electricity. We were advocating smaller, cleaner generation and cogeneration closer to users, no longer centralized but more and more decentralized. But this alternative electricity story gained little traction until the early 1990s. By that time I was at Chatham House, and Chatham House was ready for a new story.

Over nearly a century, of course, as the world has changed, the stories of interest to Chatham House have also changed. One change in particular has been striking - the rise of energy and environment as international affairs, especially throughout my own quarter-century of affiliation. The significant involvement of Chatham House in the politics and policy of energy had begun in 1979, after the fall of the Shah in Iran triggered the second so-called 'oil shock'. Chatham House joined forces with the Policy Studies Institute and the British Institute of Energy Economics to launch what was then called the Joint Energy Programme, initially focused on global petroleum issues. Within a few years the petroleum story expanded to embrace also natural gas, as it too became more and more international.

Then, in 1988, the Toronto conference on 'A Changing Atmosphere' at last jolted politicians, among them Mrs Thatcher, into awareness of the climate threat that had concerned scientists for decades. By this time the former partners had dropped out, but Chatham House research continued, in what became the Energy and Environment Programme. In subsequent years it became the Sustainable Development Programme, the Energy, Environment and Development Programme, and the Energy, Environment and Resources Department, EER. I understand that EER is now the largest single research department in Chatham House, both in numbers and in budget.

In 1991, however, the Energy and Environment Programme was just finding its feet. Its first publications on the climate issue had just appeared, notably a two-volume report led by Michael Grubb on *Energy Policies and the Greenhouse Effect.* Jonathan Stern's report on *European Gas Markets* also included an appendix examining the climatic consequences of methane leakage from gas facilities - a prescient insight, only now at last widely recognized, more than two decades later.

Until the late 1980s, electricity as a policy issue was essentially confined within national borders. Then the Thatcher government abruptly decided to sell off UK electricity to private investors, setting in motion a wave of 'liberalization' in many countries that shook electricity to its foundations. One corollary was that electricity became an 'international affair', eminently suitable for analysis and story-telling at Chatham House.

While I was trying to find funding for a project on Romania I was also paying close attention to the turmoil affecting electricity, in the UK and elsewhere. A few years ago, while sorting through boxes of my old typescripts from preceding decades, I was startled to come across a proposal I had written in 1991, about the time I joined Chatham House, for a project I called 'Transforming Electricity'. By the mid-1990s I had completely forgotten this proposal and this title. But I must have subliminally remembered it, because by 1995 I was working on a book for EEP that I would call *Transforming Electricity.*

Then, in April 1995, I had a bad fall at my home, with fractures and other consequences that made concentration and writing very difficult for nearly two years. Surprisingly enough, however, that proved to have an unexpected benefit. Before I hurt myself I had laid out a draft outline of the book, describing various developments that might come to affect world electricity. At the time, early 1995, they were still essentially hypothetical. However, by the time I'd recovered sufficiently to return to work on the book, in the latter half of 1997, a lot of these developments were no longer hypothetical. They were actually happening. Instead of describing possibilities, the book could now recount practical realities, events on the ground demonstrating the dramatic changes already engulfing world electricity.

Transforming Electricity was published early in 1999. I tried to write it for general readers, but despite my best efforts it did not do much business. I thought it would probably annoy electricity people, questioning their traditional assumptions. To my surprise, however, it sold a respectable number of copies to people in the electricity industry, including the major technology supplier ABB, who enlisted me as an outside participant in a year-long strategy review. When I mentioned this to colleagues, they at once explained. 'Electricity used to be run by engineers. After liberalization it's being run by accountants, lawyers, economists and political scientists. They're buying your book to find out how electricity works.'

While I was watching the electricity story develop, Chatham House launched a fascinating exercise that was to generate yet another story. Anticipating the arrival of the year 2000, Rosemary Hollis, then head of the Middle East programme, chaired a series of internal seminars to discuss key themes for the new millennium. The whole of Chatham House was invited to take part. Each seminar was introduced by a Chatham House expert. Discussions involved not only researchers but also staff from administrators, library, meetings, conferences and caterers - vividly lively and illuminating, certainly for me and, I think, for everyone.

I undertook to synthesize the discussions into a final document. That became the most difficult writing challenge I have ever tackled, to distil this vast outpouring of highly-informed intensity into a single coherent narrative. It took me about four months, and entailed a lot of lying awake while fragments of story rattled around my brain. It became a long essay that I called *Running The Planet*. Once it had passed a detailed review by seminar participants it was published as a special millennium supplement to the Chatham House monthly magazine *The World Today.* I was later overjoyed to have it published in more permanent form, as an appendix to my next book, *Keeping The Lights On*.

Rereading *Running The Planet* while preparing this presentation reminded me that it's the closest I've ever come to a personal worldview, even a manifesto. It´s also, of course, a story, a narrative about how we live – how we live together, and how we live on this planet we share. We organize ourselves in groups – family, tribe, neighbourhood, town, province, nation, state – that emphasize our differences, not our common humanity. I recalled a short story I read in my early teens, around 1950, by the science fiction author Murray Leinster. It was called ´The Enemy Planet´. It told how listening posts all over the earth began receiving threatening messages from outer space, from invaders on their way to take over our world. Faced by this awesome challenge, the governments of the earth set aside their terrestrial disputes and conflicts, rallying together to confront the invaders. The denouement of the story, however, was unexpected. A group of scientists on earth had discovered a layer high in the stratosphere, off which they could bounce signals. They sent threatening messages appearing to come from ´outer space´, in order to force the earth´s governments to stop warring and work together to ward off a global catastrophe. I have recently

tried repeatedly to find a copy of the story, without success – because I can´t now remember how it ended. Did global cooperation persist? or did wars break out all over again?

The story has a resonance for me for obvious reasons. By disrupting the climate we have created a potential global catastrophe which is not fiction but all too real, not from outer space but from our everyday activities. Since the Toronto conference of 1988 climate has been an international issue - that is, an issue between national governments. But it is much more than an ´international' affair. Those involved now also include international organizations, alliances, corporations and NGOs - key players but not 'nations'. Can we somehow work together to confront climate change? The signs are not, frankly, propitious. National governments have been wrangling for nearly three decades. They came together in Paris last December, but the agreement - welcome though it is - still falls well short of what we need to avoid catastrophe.

However, even though the ´international' dimension of the story looks alarming, the local dimension looks much brighter. Cities in particular have been taking the lead, not with rhetoric but with action. They are cooperating worldwide in groups called ´Local Governments for Sustainability´, ´United Cities and Local Governments´, and the C40 Cities Climate Leadership Group, as the ´Paris City Hall Declaration' of more than 1000 mayors and local officials demonstrated during the Paris summit last December. That is a striking feature of recent developments. Interactions between local and global aspects now often bypass the national, as social organization changes.

I´ve been particularly struck by this fascinating dynamic, this move from centralized to decentralized - that is, local - activities and decision-making, in my own work on electricity. Traditional electricity systems typically coincided with national or regional boundaries, monopolies with centralized configurations, management and control. Electricity systems were - and in many places still are - centres of enormous political power, either directly part of government or franchised by government. However, even two decades ago some of us could see a dramatic change taking shape. A combination of gas turbines and cheap natural gas had broken the traditional mantra declaring that a better power station was always a bigger one farther away. Wind turbines, too, looked ever more attractive, despite the efforts of nuclear diehards to label them ugly. Even solar photovoltaics, although still expensive, looked promising in some sunny places. Quite suddenly smaller, cleaner generators, closer to users, were becoming a serious option.

Some of you will know that I´ve long been a stubborn pedant, ranting away about the distorted and misleading language we use when we´re talking about energy policy. By 2007, when Chatham House published my next book, *Keeping The Lights On* was, I gave it the subtitle *Towards Sustainable Electricity.* It tried to use more accurate and precise language to tell a dramatically different story about electricity in society - how we produce it, how we deliver it, how we use it, how we manage and control it. Then I gradually realized that the story I was trying to tell about sustainable electricity could apply to every aspect of energy use in human life.

I´ve long believed that those of us concerned about the many threats we now confront, locally and globally, need a better story about the kind of future we prefer. That of course puts me at the back of a long queue of philosophers, political scientists and other radicals, all seeking a better way for us humans to live together on a crowded planet. But my personal approach might nevertheless be worth considering. It starts with thermodynamics - the physical laws that govern our activities. The current version of my developing story is my latest book, which I called *Electricity Vs Fire: The Fight For Our Future.*

I´ve long deplored the degraded use of the profound and potent word ´energy' as a simple shorthand for oil, coal, natural gas or electricity. *Electricity Vs Fire* avoids the word ´energy' completely. *[Author´s correction: not ´completely´; the word does appear briefly halfway through. ´Climate´ does not appear at all.]* Instead it talks about human activity systems, which deliver what we really want - comfort, illumination, motive power, mobility, communications and so on. We´ve come to call these ´energy services´. But the most important part of the system is not the so-called ´energy´, the fuel or electricity. The most important part is the physical things - buildings, lamps, motors, electronics and so on. The better they are, the less fuel or electricity we need. What we call ´energy services' are really ´thing services´, although I don`t expect that expression to catch on.

With the physical things, human activity systems use two processes - fire and electricity. We humans evolved with fire. We still think of it as cosy and welcoming, hearth and home. But it´s actually violent and extreme. It produces heat at a temperature so high it´s dangerous. It turns resources rapidly into waste, and the waste is usually pernicious, locally or globally. We´ve become used to hearing how bad fossil fuels are - but the fault is not in the fuel. It´s what we do with it. We burn it. We set fire to it. What produces the fumes suffocating cities, and the carbon dioxide upsetting the climate, is not the fuel. It´s fire.

Throughout human existence we´ve used fire to make light, to cook, to keep us warm, to smelt metals and bake ceramics, and eventually - with the steam engine and internal combustion engine - to exert force and deliver mobility - essential human activities. We can´t do without these activities. Does that mean we can´t do without fire, despite the rampant damage it is doing to our cities and our planet? No, it does not - because fire has given us control of electricity. We can now do with electricity most of what we used to do with fire. Unlike fire, electricity does not destroy what it happens in, nor does it produce pernicious waste. We can use it at almost any temperature, down almost to absolute zero. Electricity can save us from fire - except of course for one awkward detail. We still make most of our electricity with fire.

We don´t have to. Since we first used electricity two centuries ago we´ve known how to make it with chemical batteries, then with moving wires, and more recently even from sunlight. But we still think electricity made with fire is cheap, even as it strangles our cities and upsets the climate. Once we start accounting accurately for the real, alarming cost of fire, the many fire-free alternatives now available look ever cheaper, more economic and more appealing.

The problem, of course, is that some of the world´s largest companies, and indeed entire countries, depend for their revenue on feeding fire. In February this year the Chatham House monthly *The World Today* published a short piece of mine called ´The burning issue´. I put it like this: ´An appealing vision of an electric future, ever more free of fire, is steadily taking shape. But innovators face fierce opposition from those who derive financial and political clout from feeding fire. The confrontation is neither technological, nor economic. It is fundamentally political – a political battle we can't afford to lose´.

In fact the implications are yet more profound. In *Electricity Vs Fire* I put in like this: ´Apart from food, fuel to feed fire is the only product we make that we intend to be consumed continuously, to be used up, to be continuously replaced. Everything else we make - clothing, footwear, furnishings, tools, vehicles, buildings - is, or should be, durable, something that lasts. Since the 1980s we have even given this quality an ungainly name - 'sustainability'.

´Despite such putative aspirations, however, we have instead created a global economy modeled on fire and its consequences, a 'consumer society' whose central function appears to be to turn

resources into waste as fast as possible. As far as this global economy is concerned, you and I are consumers. Our role is to act like fire, to consume resources. The oxymoron 'consumer durables' succinctly pinpoints the paradox.

´This is stupid and dangerous. We urgently need to move away from fire as the model for human activities. That in turn will entail changing the model of our global economy. We need to change the way the world works - a daunting but exhilarating challenge. To move beyond today's destructive Fire Economy we need different ground-rules. We need different forms of business and commerce. We need different transactions and business relationships, not short term but long term and durable. We also need appropriate regulatory frameworks, and financial instruments and practices. We need to rethink the whole value structure that governs what we do and how.´

When I wrote that, I knew I was getting well out of my comfort zone. Friends who have read *Electricity Vs Fire* have told me ´Walt, it´s a really good book but it stops just when it´s most exciting´. I know that - but I had to stop before making a fool of myself. I´m now trying to teach myself enough about all those topics I just listed, to see how this story might continue.

A key theme is thermodynamics. Some of you may recall one of my favourite stories from my old friend Amory Lovins. ´We know three ways to make a good building material out of limestone. You can cut it into blocks. You can calcine it at 1200 Celsius to make cement. Or you can feed it to a chicken.´ Weight for weight, eggshell is a very strong material. But we don´t know how the chicken does it; and it does it at a chicken´s body temperature.

Creative natural processes do not need the large temperature differences we get from fire. I have believed for many years that we ought to make human activity systems converge toward natural systems, with modest temperature differences, circular use of resources and minimal increases in the disorder that thermodynamics calls entropy. It´s a tall order; but it´s fun to think about. If I can work out a sufficiently persuasive story, it´ll be my next book. I already have a title. It´ll be called *Living Cool: Taking The Heat Out Of What We Do.*

If and when I work out a story, the first people I´ll tell it to will be my friends and colleagues here at Chatham House. I know they won´t let me make a fool of myself. Meanwhile, as we race against time to get fire back under control, to keep our city air breathable and our only planet liveable, I´m still hoping this story has a happy ending.