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TRANSFORMING IAEA SAFEGUARDS CULTURE

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ABSTRACT

The Iraqi non-compliance case in the early 1990s resulted in what has been called a ‘revolution’ in IAEA safeguards. Accompanying this development, whether intended or not, has come a transformation of the Agency’s safeguards culture.¹ This transformation has, in cultural theory terms, resulted in new or modified cultural artefacts, espoused values and underlying assumptions. The paper will dissect traditional safeguards culture, outline some of the changes that have occurred since Iraq, examine some of the current challenges facing the culture and propose ways of pursuing an optimal safeguards culture.

INTRODUCTION

Culture theory contends that one of the keys to understanding how organizations operate is the shared values, norms, perceptions, attitudes, and resulting behavior of those who work in them. Organizational behavior, viewed through this lens, reflects implicit or even unconscious understandings about ‘the way we do things around here’ — rather than organizational charts, official processes, or the ‘company line’ about how things are done. In investigating culture, the most revealing comments often come from rank-and-file employees when explaining how they do their jobs day-to-day—in contrast to their formal job descriptions and how management envisages those jobs being done pursuant to political decisions or strategic planning. Edgar H. Schein, a pioneer in organizational culture studies, sets out three levels of culture from the ‘very visible to the very tacit and invisible’, which he designates as artefacts, espoused values, and underlying assumptions.² A key insight of the cultural perspective is that decisions made for political and institutional reasons may be absorbed, shaped, distorted, ignored, or resisted by an organization’s culture. As renowned organizational theorist Peter Drucker reportedly famously said, ‘culture eats strategy for breakfast’.³

IAEA SAFEGUARDS CULTURE

Although organizational culture continually evolves, its basic elements coalesce during an organization’s formative years. At the IAEA, this occurred in the late 1950s and early 1960s.⁴ By the time the Iraq case emerged in 1991 to challenge some of its fundamentals, the IAEA’s safeguards culture had gestated for more than three decades into a self-reinforcing set of beliefs, attitudes, and behaviors. In addition to its own unique characteristics, safeguards culture naturally also

came to reflect the many factors—political, technical, operational, and financial—that had shaped the broader IAEA organizational culture. The IAEA in turn, nested like a Russian *Matryoshka* doll within a broader United Nations system, reflected elements of UN organizational culture. Teasing out what is unique to safeguards culture, rather than UN and IAEA organizational culture, can be tricky.

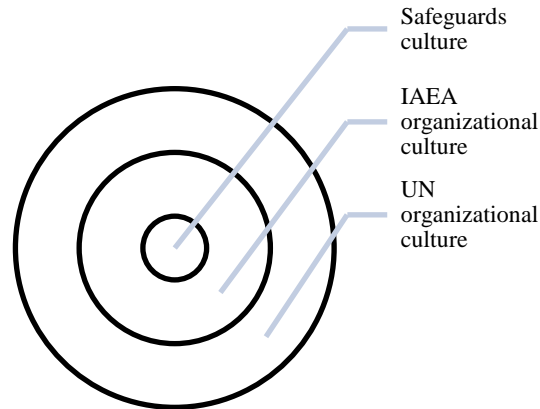


Figure 1. The institutional context of safeguards culture

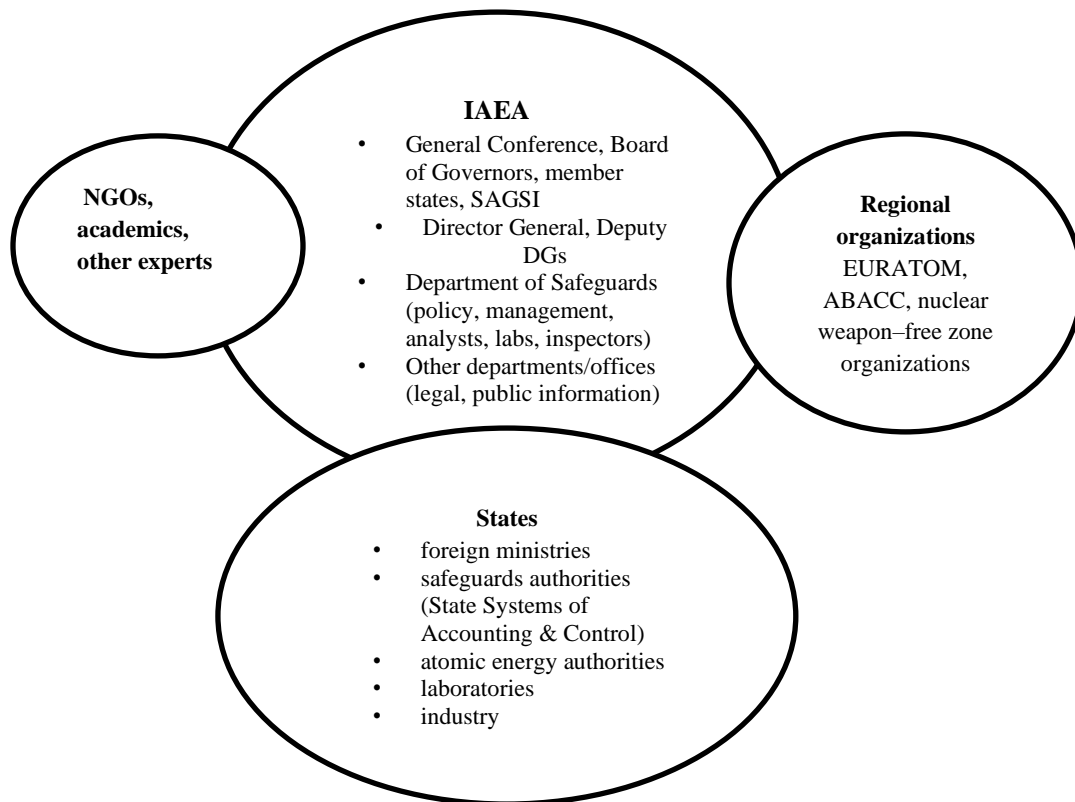


Figure 2. The international safeguards community

Another characteristic of organizational culture is that it ‘belongs’ to a definable group of people who, wittingly and unwittingly, devise and grow it, guard it, and purvey it to others. Safeguards culture is particularly complex because of the sheer number of players in the safeguards community that contribute to it, as illustrated in Figure 2. Cultural influences flow in all directions, although not equally. The IAEA itself, and within the Agency the Safeguards Department, is the nucleus around which all the other contributors orbit. But member states, particularly the United States, along with a handful of other countries, mostly Western, have made fundamental and enduring contributions to IAEA safeguards culture.

Traditional safeguards culture was based on foundational cultural artefacts like the 1957 IAEA Statute, the 1968 Nuclear Non-Proliferation Treaty, Comprehensive Safeguards Agreements, Small Quantities Protocols and subsidiary documents that flowed from those. Espoused values emphasized the contribution of safeguards to international peace and security; deference to member states versus assertions of Secretariat autonomy in running the safeguards system (cultural threads do not always pull in the same direction); and emphasis on the Agency’s standing as an apolitical, impartial, scientific and technical body guided by the ‘Spirit of Vienna’.

The most prevalent underlying assumptions of the culture included the view that no state would deliberately violate its safeguards commitments, especially by operating a clandestine nuclear fuel cycle in parallel to its declared one; that the role of safeguards was to detect diversion of declared material and facilities from peaceful to military uses; that inspectors could not go on a ‘witch hunt’ for undeclared material and facilities; and that the Secretariat could not use all the verification tools available to it, notably special inspections, as states would object.

As various types of safeguards agreements were being negotiated by IAEA member states there was evidence of significant ‘buyers’ remorse’ for the expansive vision of safeguards in the Statute and the NPT. Rudolf Rometsch, the first head of the Safeguards Department (1969–1978), recalled that negotiations on the comprehensive safeguards system in the Committee of the Whole in 1970 ‘led...to a sort of dogma for field work—if not a taboo.... It was the question of whether inspections should be designed also to detect undeclared facilities. The conclusion was clear at the time: looking for clandestine activities was out of the question and the inspection system was designed accordingly’.⁵

For inspectors, in implementing safeguards on-site, and for safeguards managers in Vienna, the culture devolved to a focus on nuclear materials accountancy as applied to declared materials, to the exclusion of concern about what might not be declared. Inspectors were in any case not recruited through a rigorous selection process and selected for the investigatory skills but were essentially nominated by member states. In the early years, training for inspectors was scant and their reports back to headquarters were unsystematic and indifferently filed.

A classic illustration of ‘the way we do things around here’ that is at the heart of culture is provided by Roger Howsley.⁶ After a week-long meeting of the IAEA’s Special Advisory Group on Safeguards Implementation (SAGSI), his then boss, the Director of British Nuclear Fuels Limited, asked him what he thought of safeguards: ‘And I remember saying to him I really don’t understand why it is limited to the verification of declared material because who would divert declared material? And with a sort of slight air of superiority he sort of tapped me on the head and said “well, eventually you’ll get to understand what this is all about”’.⁷

From the outset one of the underlying assumptions of traditional safeguards culture was that there was a disconnection between the Agency’s high-flying rhetoric about the contribution of safeguards to international peace and security and the day-to-day work of the Department. This was epitomized by a cartoon on an inspector’s office wall that said: ‘Safeguards is like wetting your pants while wearing a dark suit—you get that warm feeling but no one seems to notice’.⁸ This speaks to several phenomena of the culture: mixed messages from member states and the Agency’s leadership about the importance of safeguards; awareness of technical flaws in the system; and the overarching political context of what was often promoted as a purely technical activity in a technical organization. This skepticism even extended to suspicion among some safeguards personnel that if non-compliance were detected, political pressure would be brought to bear by member states or the Agency’s leadership to ignore it or at least delay revealing it for as long as possible.

The widespread underlying assumption that safeguards was only concerned with ‘diversion’ of declared materials and facilities is a textbook example of cultural amnesia. It presumably began with states’ dawning realization that what they had agreed to in safeguards documents (even though they represented a watered-down version of the original grand visions for safeguards) was rather too radical to stomach once it came to implementation. This combined with the Secretariat’s understandable initial preoccupation with designing and implementing an unparalleled system that would deal effectively with declared materials, while setting aside the daunting challenge of the undeclared.

The little noted ambiguity of the word ‘diversion’ in English also perhaps played a part. In English, the word ‘divert’ means to ‘turn aside (a thing) from its path or original purpose’.⁹ In the case of safeguards, this implies moving nuclear material physically from a declared location to another so it can be used for illicit purposes. In the original U.S. bilateral safeguards agreements, from which the IAEA system drew its inspiration, this was certainly the principal concern—that U.S.-supplied materials and technology would be diverted to nuclear weapons purposes. Yet material can be misused *in situ* without being ‘diverted’. Moreover, illegally imported material is, logically, not being diverted from one purpose to another but brought into the country for illicit purposes. Indigenously mined, processed, and enriched nuclear material is not being diverted so much as brought into being. Undeclared nuclear facilities are not being diverted but constructed.

The language of U.S. bilateral agreements, it turns out, was ill-suited to international safeguards, but once introduced it stuck.

As years went by and consciousness of the negotiating record faded, new personnel simply took it for granted that it was their task to focus only on diversion of what was declared. Member states were certainly not willing to rock the safeguards boat. For inspectors with an engineering background, it was professionally satisfying and culturally more comfortable to deal with declared materials that they could measure and account for, rather than speculating about what might, theoretically, be undeclared. Pressure on budgets, continuous expansion in the quantities of material and number of facilities and the ‘path dependency’ that inflicts many human activities, did the rest. Former senior legal advisor Laura Rockwood reports that when she joined the Agency in 1985, she was surprised by the prevalence of the assumption, even in the Office of Legal Affairs, that safeguards only concerned declared materials and facilities, and that special inspections could not be used to clarify suspected cases of undeclared activities.¹⁰

This cultural drift was, if anything, over-determined. Before Iraq there had been no major violations of safeguards. Experience reinforced confidence in the system. The ban on the Secretariat officially using other sources (such as states’ intelligence information, press reports and NGO findings) in safeguards decisions kept dissident voices at bay. Psychological phenomena that plague human judgement under uncertainty, such as confirmation bias and the avoidance of cognitive dissonance, prevented suspicions from surfacing.¹¹ As former Director General Mohamed ElBaradei conceded, ‘Before Iraq it was smooth sailing at the Agency. The good life’.¹²

The most fascinating aspect of the phenomenon is that none of the key players can to this day fully explain how it came about—which is typical of the emergence of underlying assumptions in a culture. As Myron Kratzer reportedly told Laura Rockwood, ‘What was it about the word “all” that people didn’t get?’¹³ Rich Hooper, one of the ‘fathers’ of INFCIRC/153, explains that in 1993, as consideration was being given to strengthening safeguards:¹⁴

I went to considerable effort and I was certainly in a position to find out why did things developed the way they did. Why the focus on declared vis a vis undeclared, where the basic undertaking of states clearly provided the possibility of both. Arrangements were made for me to spend a couple of weeks with David Fischer, who from the Agency side certainly was a very experienced and knowledgeable observer and participant in all of this. But in the end, the conclusion I came to was [that] all these questions are largely rhetorical—that there is no answer, it just is that way.

TOWARDS A NEW IAEA SAFEGUARDS CULTURE

Following the Iraq revelations, the IAEA’s focus was on revamping the system’s legal, technical, and procedural flaws. Some observers called for revamping

safeguards culture, but they never specified how this should be done and what a new safeguards culture would look like. Unlike the fields of nuclear safety and nuclear security, cultural change has never been widely recognized as part of improving and sustaining the effectiveness of IAEA safeguards. The Secretariat has not adopted an avowed strategy of cultural change, nor for the most part has it used the language of culture. Yet revolutionary changes in the safeguards system have inevitably produced changes in safeguards culture in the three areas identified by organizational theorists as key: artefacts, espoused values, and underlying assumptions.

New artefacts have emerged in the legal, planning, and process realms. These have reinforced the legal, operational and technical basis of safeguards and enhanced the powers, responsibilities, and autonomy of the Safeguards Department in running the system. The most important legal change, in extending the inspection, information-gathering, and analytical powers of the Secretariat, is the Additional Protocol. As for new planning artefacts, the most significant in cultural terms is the Safeguards Department's Long-Term Strategic Plan (2012–2023). The Department's Quality Management efforts are also noteworthy in sending appropriate cultural signals. Finally, new process artefacts have emerged, like the State-Level Concept (SLC), the State-Level Approach (SLA), integrated safeguards, 'weaponization' indicators, and means for detecting illicit nuclear trafficking.

The greatest changes in espoused values have concerned 'correctness and completeness' (the recognition that safeguards conclusions do indeed need to consider the entirety of a state's nuclear capacities and activities); the need for a more investigatory approach by inspectors, and the value of a more collaborative approach by all safeguards personnel, especially between analysts and inspectors in crafting State-level Approaches and the Broader Conclusion.

Judging from the outside, safeguards culture today appears overall to embody values and attitudes that comport well with the Agency's mission to help prevent nuclear weapons proliferation. The Department is also rightly proud of the way it has handled the most serious non-compliance cases it has confronted since the Iraq case. It is also justifiably pleased with its continuing efforts to strengthen safeguards, while enduring mostly zero real growth in its budget.

Cultural change takes time, however, and may not yet be fully reflected in underlying assumptions ('the way we do things around here') held by safeguards personnel. While reactions to probing questions about safeguards culture reveal a high degree of group solidarity and dedication to the mission, some misgivings are aired, which is only natural as no organization or human activity is perfect. Some concerns derive from the well-known limitations of safeguards, some feed on the uncertain contribution of safeguards to non-proliferation, and some relate to the practical challenges in detecting undeclared nuclear materials, facilities, and activities, especially without the cooperation of member states.

There is also defensiveness among some when questioned about their culture, which is also common in cultural research. It would be surprising if attacks on the State-level Concept and the travails of the Iran non-compliance case had left staff morale unaffected. But scepticism remains among some about the utility of the concept of organizational culture itself, perhaps due to a lack of understanding about the insights it can provide and fear of what it might reveal. There also seem to be fears that discussions of culture will be misinterpreted in a multinational organization as being criticisms of national cultures. More open attention to both the positives and negatives of safeguards culture, past and present, may alleviate this problem.

Paradoxically, the prevailing legal/bureaucratic/scientific/technical culture of the Agency may mitigate against taking what is essentially a sociological approach to safeguards challenges. This persists even though the Secretariat has long been involved in changing safeguards culture, whether intentionally or not.

Paradoxically, the Secretariat well understands the value of others attending to their organizational culture. In its 2014 report, *Managing Organizational Change in Nuclear Organizations*, the Department of Nuclear Energy recommended that ‘achieving and sustaining the goals of organizational change requires that all changes be clearly connected to an organization’s culture. Making this connection not only enables effective implementation, but also embeds change into the daily life of an organization’.¹⁵ Safeguards also stands in stark contrast to the Secretariat’s approaches to nuclear safety and nuclear security, where the value of the cultural approach has long been recognized.¹⁶

The true underlying assumptions of today’s safeguards culture are, however, simply unknown. Anecdotes and ‘reading between the lines’ can only take one so far. Only a comprehensive survey and in-depth study, with access to all or a representative sample of safeguards-relevant personnel at the Agency, would reveal the true underlying assumptions that currently prevail.

CONTINUING CHALLENGES FOR SAFEGUARDS CULTURE

Despite its best intentions the Safeguards Department is unable, by itself, to change Agency-wide, much less UN, cultural norms that deeply affect safeguards culture—the most prominent being those related to leadership, management style, recruitment, and promotion. The rotation system, the use of external consultants, the rewards system and performance assessment procedures all help shape organizational culture. Any action must come from the highest levels of the Agency—the Director General and senior staff, as well the Board of Governors and general membership.

Staff turnover and generational change are helping ensure that safeguards culture is constantly evolving, including in unexpected ways, especially as the proportion of women and personnel from under-represented countries increases. The Department also faces the continuing challenge of integrating or at least reconciling several sub-cultures, especially the bureaucratic and scientific, as well

as inspector and analyst sub-cultures. This is more reason for paying attention to cultural issues.

The need to ensure an optimal safeguards culture has assumed greater importance with the continuing imbroglio over the Joint Comprehensive Plan of Action (JCPOA). The Agency faces the invidious—and culturally confounding—situation of verifying both compliance and non-compliance with the agreement. The Secretariat will have to be nimble and creative in handling all possibilities. The parties to the agreement, the UN Security Council, and the entire international community are watching closely to see how the Agency performs. Not since the Iraq case have safeguards personnel been required to be as intrusive, inquisitive, investigatory, questioning, and persistent. The new safeguards culture needs to be on full display.

CULTIVATING AN OPTIMAL SAFEGUARDS CULTURE

The elements of an optimal safeguards culture should be readily apparent. Some of these are aspirations that all organizations should have: organizational excellence; a sense of service and loyalty; and a commitment to effectiveness and efficiency. These are now embodied in the Long-Term Strategic Plan and its accompanying review process, as well as in the Quality Statement and Quality Management process. Other values are specific to the Agency as an international organization dedicated to a higher cause than its own well-being, notably international peace and security. These needs to be sustained and promoted, because it is easy in the day-to-day pursuit of technical goals to lose sight of the ultimate aim of the safeguards enterprise.

The Secretariat should engage the entire safeguards community, including member states, to reach an agreed definition of safeguards culture and identify the elements that constitute an optimal culture, just as the nuclear safety and security communities have done. While such an exercise will not automatically lead to cultural change, it can serve as a guide and inspiration to the Secretariat, member states and other stakeholders. A possible definition, mimicking the definitions of safety and security culture is: ‘that assembly of characteristics, attitudes, and behaviour, exhibited by all the Agency’s personnel, which supports and enhances effective and efficient nuclear safeguards as a vital contribution to the non-proliferation of nuclear weapons and international peace and security’. But an agreed definition is only the beginning.

The Agency should commission a survey and study of its organizational culture by qualified management experts, with a focus on safeguards and related staff. This should include surveying not just attitudes towards work and work practices but reflections on the impact on safeguards culture of the staff rotation policy, recruitment and training practices, staff assessment and counselling, and the reward system. It should seek lessons from other organizations with quasi-regulatory functions. This would include learning how other international organizations create a loyal, permanent inspectorate with a robust regulatory culture, either within or outside UN employment practices.

When contemplating major organizational change, the Agency should from the outset include consideration of the likely cultural impact and put in place measures to achieve the desired cultural shift. This includes appointing officers in charge of cultural change management.

An optimal safeguards culture should embody a strong commitment by the entire Agency, not just the Safeguards Department, to the non-proliferation regime. Some parts of the Agency may not see safeguards as the most important role that the Agency performs for the global community. It is up to the Director General to set the tone in this regard. Any adjustment of the Agency's self-image should, of course, be accomplished without making developing countries concerned that reduced attention will be paid to their priorities.

In the new safeguards system everyone's contribution to safeguards, whether manager, inspector, or analyst, needs to be duly acknowledged and rewarded. Given the unique value of the inspectors as the 'eyes and ears' of the Agency on the ground, the Secretariat needs to accomplish the tricky feat of reassuring the inspectorate of its continued unique value and importance while also integrating them into more collaborative analytical and planning processes that now involve a much bigger team of players. In addition, ways need to be found to reassure the inspectors of their value in the face of increasing deployment of advanced safeguards technologies that make some aspects of inspectors' jobs redundant.

One cultural value that is vital to an optimal safeguards culture but has not been successfully established to date, despite efforts under the decades-old 'One House' campaign, is the need for greater internal and external transparency and openness. Opacity helps preserve the Secretariat's autonomy in managing safeguards and avoids member states' second-guessing or seeking to micromanage its decisions, but it also makes it difficult for the Agency's many supporters to rally around and assist when the Agency is unfairly criticized. The Secretariat itself needs to be willing to defend its actions publicly when misrepresented. Change in this cultural norm can also only come from the top.

CONCLUSIONS

Culture is woven into virtually all aspects of the safeguards enterprise, from management at headquarters to operations in the field, from the Agency's reputation as a fair and equitable employer to its standing as a contributor to international peace and security. Maximizing the effectiveness of IAEA safeguards therefore requires attention to safeguards culture. The IAEA has made eminently sensible recommendations to its member states about how they should handle culture amidst organizational change at their national nuclear agencies. It behoves the Agency to apply such admonitions to itself.

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