

# The metamorphosis of the records manager

Frans Smit

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There is a crisis happening regarding records management. Everything is changing: from our definitions and concepts to managing information in practice. One might even say that the records management professional himself will be subjected to a fundamental change. This article explores the new landscape of the records manager and the archivist. It highlights some developments in disciplines that are of fundamental interest to archivists and records managers: information governance, information management, information architecture and quality management. Records managers and archivists should be able to understand and master those disciplines. This may even result in new professions. This development is happening now and it is far too early to draw conclusions. It is clear however that this crisis must be met with a profound reflection on the new landscape. We might even have to find our inspiration in Information Philosophy, where ICT theory can meet archival theory.

*How does newness come into this world?*

*How is it born?*

*Of what fusions, translations, conjoinings is it made?*

Salman Rushdie, *The Satanic Verses*

## Introduction<sup>1</sup>

In his essay *I Barbari* ('The Barbarians')<sup>2</sup> the Italian writer and philosopher Alessandro Baricco describes the fundamental transformation of Western society. This change goes far beyond a gradual development of existing values. According to Baricco we live in an era

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1 This article is an abridged and revised version of my paper 'Becoming a Barbarian'; a version was also presented at the ICA Annual Conference 2013 in Brussels (see <http://www.ica.org/14927/speakers/frans-smit.html>) The issues and observations in both are based on an article written in Dutch: SMIT F.P. *Krijgen archiefinspecteurs kieuwen? Over de transformatie van archieftoezicht*, Stichting Archiefpublicaties, The Hague, 2013, pp. 21–39. This article has evolved from that publication, with new insights and written for a wider, international audience. I would like to thank Prof. K.J.P. F.M. Jeurgens (Professor of Archival Science at Leiden University, Netherlands) and Rienk Jonker (City Archivist of Leeuwarden, Netherlands) for their feedback on earlier versions.

2 BARICCO Alessandro, *De Barbaren* (trans. Manon Smits), Amsterdam, 2011. At the time of writing this article (September 2013–August 2014) there was no English translation available to me. This translation is therefore by myself, based upon the authorized Dutch translation.

where everything is turned upside down. In the spirit of the ancient Greeks he compares the advocates of this shift with ‘Barbarians’:

(...) it is as if the attackers go much further: they are changing the landscape. Maybe they have changed it already. Something similar must have happened during the blessed years that the Enlightenment came to exist, or in the days that the whole world had seemed to turn Romantic. There were no massive movements of armies, and there were no sons that killed their fathers. They were mutants, that substituted one landscape for another, in which they established their habitat. We might live in such an era now. And the ones that we call barbarians might be a new species, with gills behind their ears, that have decided to live under water.<sup>3</sup>

This new landscape is a paradise for those who endlessly explore and create connections on a surface. Baricco’s mutants like to go sideways endlessly. They do not like to dig up what lies underneath the surface.

Of course Records Managers will recognize fundamental changes. Since their core business is dealing with (recorded) information, their profession is fundamentally affected by the information revolution. Present developments in information technology such as big data, enterprise search, e-discovery, cloud services and the enormous increase of recorded information all leave their marks on changing the environment, the principles, the methods and the instruments of their profession.

Information philosopher Luciano Floridi talks of our age as the ‘Fourth Revolution.’<sup>4</sup> This information revolution should put our profession in the centre of attention. Unfortunately for us, and more importantly for government administrations that have the aim to be transparent, accountable and trustworthy, this is not really the case until now as far as I can see.

In this article I briefly explore some distinct features of our new landscape and I will try to draw some conclusions about what the ‘barbaric’ Records Manager might look like. Or will the Records Manager disappear altogether?

## A new landscape

### The ‘Nexus of Forces’ and the shift in government

In 2012 Gartner published a series of papers and webcasts about managing and using information. In these strategy papers the central issue is user behaviour. The key notion is that the availability of information must be maximized. In the words of Gartner’s analysts: ‘People have come to expect and make use of presence and location services, contextual search results and spontaneous interaction with their social networks to enhance everyday experiences.’<sup>5</sup> The major trend that Gartner recognizes is as follows:

The nexus of forces describes the convergence and mutual reinforcement of four interdependent trends: social interaction, mobility, cloud, and information. The forces combine to

<sup>3</sup> BARICCO, p. 4.

<sup>4</sup> FLORIDI Luciano, *Information, a very short introduction*, Oxford, 2010, pp. 8–9. (See also Floridi’s recent publication, *The Fourth Revolution; how the Infosphere is reshaping human reality*, Oxford, 2014.)

<sup>5</sup> HOWARD C. et al., ‘The Nexus of forces: Social, mobile, cloud and information,’ G00234840, 14 June 2012, p. 4. See: [www.gartner.com/technology/research/nexus-of-forces/](http://www.gartner.com/technology/research/nexus-of-forces/) (viewed 9 September 2013)

empower individuals as they interact with each other and their information through well-designed ubiquitous technology.<sup>6</sup>

To put it in other words: the technology should help Baricco's *Barbari* in their quest for limitless access to information. And it should also enable, for example, government workers to record their information in an easy-to-use, intuitive way.<sup>7</sup> Social interaction is the main context. Networking, sharing, community building and collaborating are the keywords for this social behaviour. Cloud services should enable scalable and accessible solutions. Mobile devices let the user create and have access to information everywhere. Volume, velocity, variety and veracity are the keywords in characterizing the quantity and quality of ever present and limitlessly available information.<sup>8</sup> Gartner states that a lot of organizations, including government administrations, do not have the infrastructure and the tools to be ready for this scenario.

Another major development is the changing role of government. In recent years, for example, Dutch legislation has been heading more and more towards creating a different role for the government administration. This role should be that of participant in, and facilitator of, a community of individuals, interest groups, companies and not-for-profit organizations. The administration should act less and less as a monolithic body that governs, directs, organizes and carries out all tasks.

We can even add some more complexity if we take into account that, according to Gartner, the complexity of the inside of a solution increases when the outside gets simpler.<sup>9</sup> That observation implies that the Information Management of administrations will grow more complex as the pressure grows to make records accessible according to modern expectations: fast, ready-to-use and mobile.

'Your' records might be created, stored and used anytime and anywhere, and therefore should be managed in a huge amount of different ways and places. This is why Records Managers can no longer work without applying methods of Information Management.

## Information management

There are a lot of definitions for 'Information Management'. My notion of Information Management is that it is concerned with policies, measures and actions concerning creation; processing, management and use of information in an organization; and with the quality of the relations between those policies, measures and actions. A widely-used model for analysing the quality of Information Management is the so-called 'Amsterdam 9-Square Model' developed at the University of Amsterdam.<sup>10</sup> The strength of its usability is its simplicity, which is depicted in Diagram 1.

6 Ibid.

7 See BUSSEL G.J. van, 'Archiving should just be like an Apple™', *en acht andere, nuttige (?) stellingen*, Hogeschool van Amsterdam, 2012. [www.hbo-kennisbank.nl/nl/page/hborecord.view/?uploadId=amsterdam%3A0ai%3Ahva.nl%3A433617](http://www.hbo-kennisbank.nl/nl/page/hborecord.view/?uploadId=amsterdam%3A0ai%3Ahva.nl%3A433617) (viewed 24 September 2013).

8 These 'four Vs' are defined in Big Data architectures, see for example <http://bigdatafoundation.com/blog/big-data-spans-four-dimensions-volume-velocity-variety-and-veracity/> (viewed 15 October 2013).

9 HOWARD et. al., p. 3.

10 MAES Rik, *Reconsidering Information Management through a generic framework; Prima Vera Working Paper 99-15*, University of Amsterdam, Sept. 1999.

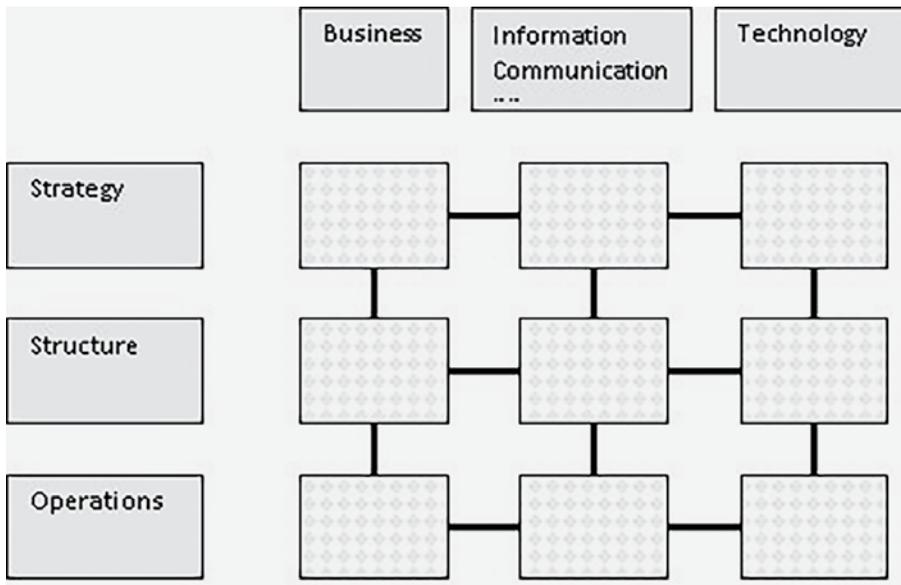


Diagram 1: The Amsterdam 9-Square Model for Information Management

This model can be used to analyse the current status, the requirements and the ambitions of every separate square and its connections. It becomes clear how strategy, organization and operations are connected. It also becomes clear whether the information and communication policies in the organization support business strategy and operations. It becomes clear whether the technology in use supports well the ‘information household’ which, for its part, should support the entire business.

Every part of this model is relevant to the Records Manager, and Records Management is important for every square and connection. It is therefore worrisome that in a lot of government administrations neither Records Management nor Records Managers are considered as a natural part of strategies, structures and operations of Information Management.

When we continue to use our example of Gartner’s report things get even more problematic:

The combination of shifting control, hyperflexibility and extreme collaboration underlying new user scenarios has deep architectural implications: How do you offer users autonomy, flexibility and choice without endangering underlying systems and data?<sup>11</sup>

How should Records Management be integrated in this world of increasing user-orientation and flexibility? Any attempt to manage recorded information that is not well integrated into Information Management policies will fail very quickly. The Records Manager should be able to cover every square and every connection. That is an almost impossible task since every field covered in the 9-square model requires deep specialization.

<sup>11</sup> HOWARD et al., p. 11

## Information architecture and standardization

An important part of Information Management is a proper understanding of Information Architectures. The term 'Information Architecture' was coined by Richard Saul Wurman,<sup>12</sup> and was introduced as a way to make information design visible and understandable. In the Netherlands today it is the main method for analysing and designing organizations and their Information Management.

In the first decade of this century a number of information architectures were developed for the Dutch government. The most generic of them is called the Nederlandse Overheids Referentie Architectuur (NORA).<sup>13</sup> NORA describes the basic principles and guidelines for the design of information systems. More architectures have been developed for specific government bodies such as local councils, provinces and 'waterschappen' (water authorities),<sup>14</sup> as well as for specific government activities like education, health care and (even) cultural heritage. At present there are several government programmes in progress that aim to implement these architectures.

All these architectures are a reflection of the enormous complexity of present-day Information Management of government administrations. They are big and highly specialized expert documents. Using the Amsterdam 9-Square Method for Information Management, NORA starts off with stating 18 Basic Principles concerning the level of services, standardization, communication and information. These are specified in 40 Derived Principles. For each principle requirements, baselines and guidelines are described. This set-up is repeated in the documents for less generic architectures, with even more specifications.

Records Managers should be able to participate in the creation and implementation of Information Architectures. Their primary aim – to preserve information and to keep this information accessible – requires that they should be involved right from the start, and should be able to talk the language of the information architects. They should also be able to create and implement viable Records Management Architectures.

An important feature of Information Architecture is standardization. This applies especially to the ways in which the various parts (or modules) of the architecture should interact with each other and with the environment of the architecture as a whole. Standardization always has been a way of getting control of complex environments. Just as money was a way of standardizing trade, and language a way to standardize human communication, standardization of e.g. network protocols, file formats and metadata is an indispensable part of creating complex environments for Information Management.

The topic of standardization has always been core business of Records Managers. The famous Dutch Manual<sup>15</sup> can be seen as a way of standardization the arrangement and description of archival holdings. Standards themselves can be categorized in various ways. Brunsson and Jacobsson make a distinction between three goals of standardization: describing the essence, describing attributes and characteristics, and describing activities

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12 WURMAN Richard: *Information Architects*, Graphis Inc, 1997. See also [www.wurman.com/rsw/index.html](http://www.wurman.com/rsw/index.html) (viewed 13 September 2013).

13 GOUTIER H. en J. VAN LIESHOUT, *NORA 3.0, principes voor samenwerking en dienstverlening*, E-overheid, 2010. An appropriate translation might be 'Dutch Referential Architecture for Administrations'.

14 See for example <http://english.uvw.nl/> (viewed 15 October 2013).

15 MULLER S., FEITH J.A. and FRUIN R., *Manual for the arrangement and description of archives*, Society of American Archivists, 2003.

of a product or a service.<sup>16</sup> Bowker and Star offer another description of the essence and function of standards.<sup>17</sup> They see standards as a set of rules about which exists a general consensus, characterized by the fact that the acceptance goes beyond one activity, location or community. Standards are not likely to change fast, yet they are temporary. They are legitimized by laws and regulations and/or by general acceptance of a professional community.

In a world of easy-to-use, and therefore extremely complex, information solutions, standardization is a necessary precondition. Almost every aspect of the work of a Records Manager is standardized. There is an abundance of standards concerning information. There are standards that describe the organizational context of the Records Manager (like rules for Quality Management, auditing, information security etc.) and the Records Managers themselves (like codes of ethics).

There are so many standards that sometimes it might appear that the profession of the Records Manager is only about following standards. Fortunately reality can never be captured 100% into structures. For example: when it comes to decisions about retention and preservation there are lot of local, regional and national traditions and opinions to be considered, meaning that the same decision taken in different locations results in very different outcomes.<sup>18</sup>

### Quality Management

Another feature of our new landscape that is becoming more and more relevant to Records Managers is Quality Management. While Quality Management at first meant merely an inspection of finished products before they left the production plant, there was a shift of interest towards the quality of production processes and procedures. At the end of the twentieth century Quality Management evolved towards assessing all possible aspects of organizations, with a big emphasis on the interaction of the organization with its environment. It became 'Total Quality Management' (TQM).

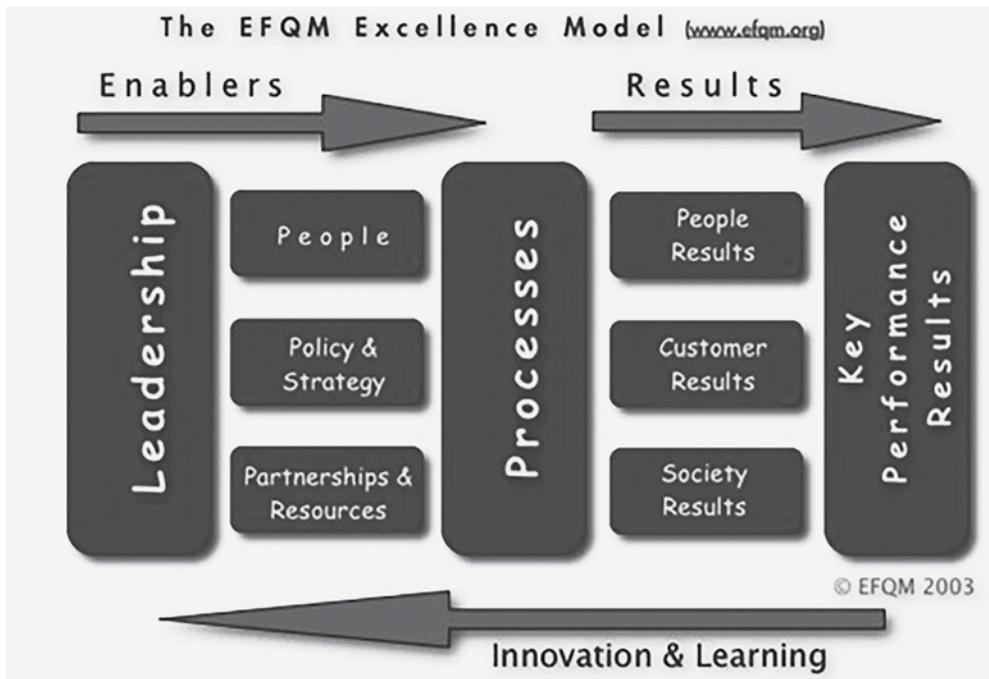
A widely-used model in Europe is the model that is created by the European Foundation of Quality Management (EFQM)<sup>19</sup> (see Diagram 2).

16 BRUNSSON Nils and JACOBSSON Bengt, 'The Contemporary Expansion of Standardization' in Brunsson, Nils and Jacobsson et al, *A World of Standards*, Oxford University Press, 2002, p. 4; cited in BELL Alan C., 'Standards and standards culture: understanding the nature and criticisms of standardization' in *Comma*, 2011:2, p. 26.

17 BOWKER Geoffrey C. and STAR Susan Leigh, *Sorting Things Out: Classification and its Consequences*, MIT Press, 2000, p. 10; cited in BELL, p. 27.

18 For example: where in western society retaining authenticity often implies keeping original material intact, in other cultures it may mean that original material should be replaced frequently in order to keep the artefact as new (and as perfect) as possible.

19 European Foundation of Quality Management at [www.efqm.org/](http://www.efqm.org/) (viewed 13 September 2013). In the Netherlands the EFQM model is widely adopted in government organizations and is known there as the INK-model. See <http://ink.nl/nl/p4bd81e110a03e/ink-managementmodel.html> (viewed 13 September 2013).

Diagram 2: The EFQM model<sup>20</sup>

The EFQM model can be used for assessing the current state of an organization, as well as for analysing what is necessary to achieve the organisation's aims and goals. The model includes the 'internal' state of the organization, its effects on the environment and the famous Deming cycle of Plan-Do-Check-Act for continuous organizational improvement.

Thinking in terms of Quality Management has been intensively incorporated in methods for improving Records Management. A good example is the Generally Accepted Record-keeping Principles (GARP) advocated by ARMA International. The Principles are incorporated into assessment methods and instruments as well as a general framework for quality improvement in terms of a Maturity Model.<sup>21</sup>

ARMA's initiative is a good example of using methods of Quality Management to improve Records Management. At the same time, quality managers are becoming aware that Records Management is an indispensable part of organization quality. This means that Quality Management professionals need to integrate Records Management activities and concepts, such as identifying document types, retention policies, authorizations and access, into their process designs and procedures.

### Information governance

The last development I want to address in this brief description of the new landscape is the emergence of Governance. Whereas Quality Management is primarily concerned with

<sup>20</sup> Source: [www.guidance-research.org/EG/ip/theory/tp/efqm/dg-4-EFQM.png/view](http://www.guidance-research.org/EG/ip/theory/tp/efqm/dg-4-EFQM.png/view) (viewed 13 September 2013).

<sup>21</sup> ARMA International, [www.arma.org/r2/generally-accepted-br-recordkeeping-principles](http://www.arma.org/r2/generally-accepted-br-recordkeeping-principles) (viewed 14 September 2013).

improving business processes (and therefore business results), Governance is concerned with controlling the organization. In the last decades of the twentieth century, due to scandals like Enron, guidelines and rules were set up for corporate governance. Governance protocols like Basel II were developed and adapted.<sup>22</sup> The heightened attention for control of business operations in the financial markets led to a renewed general interest for governance and to the introduction of 'Information Governance'.

There are different definitions for Information Governance but they all centre on the notion of being in control of Information Management. Its most important aim is to raise the level of accountability of an organization.<sup>23</sup> It is not only laws, regulations and business rules relating to Records Management which play a part in this; Information Governance also comprises laws and regulations concerning freedom of information, privacy protection and information security.

European Union Regulations make use of the concept of The Three Lines of Defence for corporate governance.<sup>24</sup> This implementation concept makes a clear positioning of responsibilities and tasks possible. It is well illustrated in Diagram 3.



Diagram 3: Three Lines of Defence Model<sup>25</sup>

The 'first line' consists of all the measures taken within the business processes. They are the responsibility of the managers of those processes. The 'second line' is concerned with setting rules and providing prerequisites. In this line the controllers, quality managers, risk managers, privacy officers, security officers and compliance officers are positioned. The 'third line' contains auditors, accountants and inspectors, both internal and external.

<sup>22</sup> Basel Committee for Banking Supervision, [www.bis.org/bcbs/index.htm](http://www.bis.org/bcbs/index.htm) (viewed 14 September 2013).

<sup>23</sup> See for example [http://blogs.gartner.com/debra\\_logan/2010/01/11/what-is-information-governance-and-why-is-it-so-hard/](http://blogs.gartner.com/debra_logan/2010/01/11/what-is-information-governance-and-why-is-it-so-hard/) (viewed 14 September 2013).

<sup>24</sup> See for example FERMA/ECIIA, *Guidance on the 8th EU Company Law Directive, DIRECTIVE 2006/43/EC – Art. 41–2b*; September 2010; <http://www.ecia.eu/about-us/news/press-conference-brussels-announcing-new-guidance-8th-eu-company-law-directive> (viewed 14 September 2013).

<sup>25</sup> See, for example, Qualified Advice Partners, 'Three lines of defence' at [www.qualified-audit-partners.be/index.php?cont=676](http://www.qualified-audit-partners.be/index.php?cont=676) (viewed 14 September 2013).

## Underneath the landscape

### Records Management 2.0

Records Management comprises foundation, functions, actors, process domains, results, functionalities, data, information objects and the technology of the organization.<sup>26</sup> All of these are changing fast in the new landscape, and at a different pace. In this article an attempt is made to sketch briefly some of these transformations. What will be the results of these changes? How will Records Management look in a world where the Nexus of Forces will be a powerful development and where barbarians will your leading users?

In his book *Managing the Crowd; rethinking Records Management for the web 2.0 world*, Steve Bailey defines 'Records Management 2.0' using ten criteria. They come close to defining the place of Records Management in the new landscape:

Records Management 2.0 must be:

1. Scalable to an (almost) infinite degree;
2. Comprehensive with the potential to address all aspects of the management of information throughout its lifecycle;
3. Independent of specific hardware, software or physical location;
4. Extensible and able to absorb new priorities and responsibilities as they emerge;
5. Potentially applicable to all recorded information;
6. Proportionate, flexible, and capable of being applied to varying levels of quality and detail as required by the information in question;
7. A benefits-led experience for users, that offers them a positive incentive to participate;
8. Marketable to end users, decision makers and stakeholders;
9. Self-critical and positively willing to embrace challenge and change
10. Acceptable to, and driven by, the Records Management community and its practitioners.<sup>27</sup>

Following Gartner's analysis we might be able to put a hierarchy in these ten criteria, putting numbers 7, 5 and 1 at the top of the list, and number 10 where it is, at the bottom. If Bailey's list defines the character of present and near-future Records Management, user-orientation and maximal responsiveness to user's needs will be the central themes.

Bailey's criteria about the applicability of Records Management for all recorded information, and about the independence of location, indicate that our profession is passing beyond all its previous boundaries. The 9-Square Model is an apt instrument to illustrate this: in every domain, and in every connection between the domains, the variety of types of recorded information and the location-independency of information will be of great influence.

This passing of all boundaries is also confirmed in recent publications like James Gleick's extremely interesting book *The Information, a history, a theory, a flood*,<sup>28</sup> a book which gives at least one important insight for Records Managers. Throughout history, information has the tendency to multiply, to take away barriers, to adapt and to use its environment to its benefit,

<sup>26</sup> This distinction is by Rienk Jonker, City Archivist of Leeuwarden, the Netherlands

<sup>27</sup> BAILEY Steve, *Managing the Crowd; rethinking Records Management for the web 2.0 world*, London, 2008, pp. 126–127.

<sup>28</sup> GLEICK James, *The Information, a history, a theory, a flood*, London, 2011.

using biological and mechanical data carriers. We see this development in the enormous and apparently endless growth of the amount of digital information. It is a hopeless task for organizations, and their Records Managers, to arrange, describe and preserve their records based on the principles and methods from the 'analogue age'.

### Redefining information and records management

When we dig deeper into the nature of this new landscape, it becomes inevitable to analyse its physical geography. It is for example necessary to re-evaluate the definitions we use for terms like 'information' and 'record'. Like words such as 'culture' and 'economy', the word 'information' is defined in multiple ways by various disciplines. ISO 5127, for example, is meant to give standardized definitions, but my feeling is that its definition of information does not move us any further forward; it defines information as '... knowledge that is communicated.'<sup>29</sup> ISO 5127 also defines 'recorded information' as 'information stored in, on, or by a data medium'. A record, according to ISO 5127, is a 'set of data on one person or object, selected and presented for a predefined specific purpose'. The definitions are not very precise. Because: what is knowledge, and what is communication? And why is a record a 'set of data', where the word 'data' is not used in the definition of information? Moreover, many Records Managers will agree that records do not have to be 'selected or presented for a predefined specific purpose' at all. And why would a record always have to be 'on one person or object'?

We might turn for help to another discipline: that of the emerging field of 'Information Philosophy'. One of the main contributors to the exploration of 'information' on a philosophical level is Luciano Floridi, who writes:

Over the past decades, it has become common to adopt a *General Definition of Information* (GDI) in terms of *data + meaning*. GDI has become an operational standard, especially in fields that treat data and information as reified entities, that is, stuff that can be manipulated (consider for example the now common expressions 'data mining' and 'information management').<sup>30</sup>

This GDI defines information, 'seen as semantic content', as an instance that consists of well formed, meaningful data.<sup>31</sup> The advantage of using this definition (apart from the fact that is always useful to use generally accepted definitions) is that it does not include other words that are extremely hard to define, like 'knowledge' and 'communication'.<sup>32</sup>

There is a definition of recorded information that fits well with Floridi's GDI. It was given by David Bearman: 'Recorded transactions are information communicated to other people in the course of business via a store of information available to them.'<sup>33</sup> This definition makes it possible to connect the instance of well-formed and meaningful data with the context that Records Managers are so familiar with.

<sup>29</sup> All citations come from *NEN ISO 5127: Information and documentation — Vocabulary*, 2001, p. 8.

<sup>30</sup> FLORIDI, *Information, a short introduction*, p. 20.

<sup>31</sup> FLORIDI, *Information, a short introduction*, p. 21.

<sup>32</sup> Floridi has written about the definition of data in 'Data', an article for the International Encyclopedia of the Social Sciences, 2nd ed., editor in chief William A. DARITY, Macmillan, 2008. Available at [www.philosophyofinformation.net/Other\\_Publications.html](http://www.philosophyofinformation.net/Other_Publications.html) (viewed 20 September 2013).

<sup>33</sup> BEARMAN David, *Electronic evidence, strategies for managing records in contemporary organizations*, Pittsburgh, 1994, p. 94.

I would like to add the following consideration about the definition and nature of metadata. Metadata are seen as 'data about data' and in the world of Records Management it is often used as 'data about records' (as for example ISO 23081 does).<sup>34</sup> This definition made a lot of sense in an analogue world where, for example, the inventory of records (the 'metadata') was separated from the records themselves. Nowadays, however, the distinctions between data and metadata continue to become more and more blurred. In a digital world it is hard to tell when data should be considered a part of the record, or when they should be seen as 'metadata', and as such not part of a record. It is for this reason that the PDF/A format, for example, includes descriptive metadata. It is also for this reason that standards like METS are designed in such a way that all data and bit streams can be included in one file. 'Metadata' about descriptive, legal, logistic and technical aspects, for example, might become considered as data that have become part of the record itself.

### Information philosophy and the crisis of the records manager

Records Management in present-day government organisations cannot be seen as a separate system or as an isolated spot. It is at least embedded in the Information Management and Quality Management of the organisation. And it is at its best fully integrated in all parts of the Information Architecture. It is because of this that Records Management requires a lot of experts and a lot of stakeholders in order to comply with laws and regulations, and to enhance trustworthiness, accountability and transparency.

We are in the middle of a period in which this integration is taking shape. Therefore it might be too early to tell which new disciplines will emerge and which ones will disappear. However, it is certain that we are confronted with an enormous shift that is already influencing everyday practices and operations. Because of this shift we might also ask ourselves if concepts and even paradigms coming from archival theory give us enough intellectual basis to remain as interested business partners or colleagues in the new land of the barbarians.

It is not an exaggeration to say that our profession faces a crisis. There are so many fundamentals that are questioned nowadays. There are so many stakeholders. There is not even consensus about fundamental definitions. And it is quite obvious that it is impossible to keep on thinking that there can be a single professional officer as 'Records Manager' who can take care of everything. He or she should know everything about preservation, Quality Management, Information Governance, Information Architecture, organizational policies, standards, software, hardware, file formats, organization planning, the informal sides of the organization, the culture and the gossip. And this officer must play a lot of roles at the same time: those of manager, keeper, controller, auditor, teacher, architect, policy maker, diplomat, trend watcher, business process engineer and customer services specialist – at least. This individual would have to be of mythological proportions to be all this at the same time.

Twenty years ago David Bearman wrote that '... the responsibilities of Records Managers and archivists will shift from physical custody to administrative and intellectual control.'<sup>35</sup> This development became reality. And now this reality is becoming even more complex and diverse. The function of Records Manager will dissolve into, and merge with, other functions and roles.

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<sup>34</sup> ISO 23081-1:2006 *Information and documentation. Records management processes. Metadata for records. Part 1: Principles.*

<sup>35</sup> BEARMAN, *Electronic evidence*, p. 86.

Is it possible to understand this crisis, these enormous changes in our discipline and the landscape in which this discipline is taking place? Information philosophy might offer a useful and appropriate starting point.<sup>36</sup> Floridi, for example, starts off with a historical context similar to Gleick's. History, as we understand it, started when human beings started recording information. Thus the start of history was also the start of the information society. The pace of development was largely determined by the development of the means of communication. After the invention of printing it became possible to distribute information on a mass scale. The development of computers and networks made it possible to communicate on a mass scale, independent of location. This last development is called 'the fourth revolution' by Floridi, after the previous three revolutions headed by Copernicus, Darwin and Freud:

Since the 1950s, computer science and ICTs have exercised both an extrovert and an introvert influence, changing not only our interactions with the world but also our self-understanding. In many respects, we are not standalone entities, but rather interconnected informational organisms or *inforgs*, sharing with biological agents and engineered artefacts a global environment ultimately made of information, the infosphere.<sup>37</sup>

Living in a digital environment means '( ... ) living in an infosphere that will become increasingly *synchronized* (time), *delocalized* (space), and *correlated* (interactions).'<sup>38</sup>

As a part of Information Philosophy, information ethics are being developed. The outlines of these ethics as described by Floridi come very close to the fundamentals for information security, privacy regulations and Records Management. The core of information ethics is resistance against 'entropy': 'Entropy here refers to any kind of *destruction, corruption, pollution* and *depletion* of informational objects. (...) It holds that *being/information* has an intrinsic worthiness.'<sup>39</sup> Information ethics is directed towards the moral issues 'moral agents' encounter in relation to information. These agents 'can use some information (information as a *resource*) to generate some other information (information as a *product*) and in so doing affect [their] informational environment (information as *target*)'.<sup>40</sup> As to information-as-a-resource, the main issues are availability, accessibility and accuracy of information.<sup>41</sup> Moral issues about information-as-a-product arise on questions about 'accountability, liability, libel legislation, testimony, plagiarism, advertising, misinformation and pragmatic rules of communication *à la Grice*'.<sup>42</sup> Information-as-a-target ethics is concerned with issues like confidentiality, privacy, security, piracy, open source, freedom of expression, censorship, filtering and contents control.<sup>43</sup>

The topics addressed by information ethics are of daily concern for Records Managers. This means that the old world of archives and records is starting to meet the world of computer science and artificial intelligence: the disciplines that are the main roots of

36 See FLORIDI, Information, a short introduction, pp. 3–18.

37 Ibid., p. 9.

38 Ibid., p. 17.

39 Ibid., p. 112.

40 FLORIDI Luciano, 'Information ethics' in FLORIDI L. (ed.), *The Cambridge Handbook of Information and Computer Ethics*, Cambridge, 2010, p. 77.

41 Ibid., p. 79.

42 Ibid., p. 79. Paul Grice, philosopher of language, developed maxims for effective communication (the Gricean Maxims).

43 Ibid., p. 80.

Information Philosophy and Information Ethics. There is a chance here to connect with colleagues such as information managers, ICT architects and CIOs on a common conceptual level. In a world where, for example, the Open Archives Information System (the OAIS model, described in ISO 14721)<sup>44</sup> should be connected with developments like cloud services, e-discovery and big data, this is not a luxury, but a necessity.

One might add that the world of archival theory has a lot to contribute to this emerging Information Philosophy. What about, for example, the concept of authenticity, in the centuries-old, objectivist sense found in diplomatics and in the more recent subjectivist sense found in heritage studies? And what about the strong consciousness in the world of archivists about professional ethics, as laid down for example in substantial products like the Code of Ethics, the Declaration on Archives and Principles of Access to Archives by the ICA?<sup>45</sup>

## The mutation of the Records Manager

All activities that we share under the header of 'Records Management' can be seen as part of all three categories of Floridi's information ethics: towards information as a resource, information as a product and information as a target. Because Records Managers in the new landscape of the barbarians cover such a vast terrain, it is almost unthinkable that they can do it on their own. They need the cooperation of a lot of other professionals. They might even merge with, and dissolve into, new professions.

When we follow Bailey's 'Records Management 2.0' and David Bearman's observation about the changing role of archivists in organizations, I think that complex government organizations will need at least seven separate types of Records Management expertise to be able to become, and stay, accountable and transparent in the infosphere. They all evolve from the 'Records Manager 1.0':

1. *The Records Auditor* will cover the Third Line of Defence. S/he will carry out internal audits and will report on the state of Records Management to, for example, a city council, directors and managers. S/he will have a major responsibility for building up, and sharing, knowledge about Records Management in the organisation;
2. *The Records Controller* will cover the Second Line of Defence. S/he will monitor compliance issues, will set up standards and guidelines for Records Management, carry out risk analysis and report to management;
3. *The Records Quality Manager* will take care of creating and monitoring procedures and descriptions of processes and functions. S/he will advise management about how to implement and manage quality systems as described in ISO 15489<sup>46</sup> and ISO 30300/30301,<sup>47</sup> and will integrate Records Management procedures into the general Quality Management cycles of the organisation;

44 ISO 14721:2012 *Space data and information transfer systems. Open archival information system (OAIS)*. Reference model.

45 See <http://www.ica.org/?lid=5555>, <http://www.ica.org/6573/reference-documents/universal-declaration-on-archives.html> and <http://www.ica.org/download.php?id=2642> (viewed 20 September 2013)

46 ISO15489 1:2001 *Information and Documentation, Records Management. Part 1. General*.

47 ISO30300:2011 *Information and Documentation, Management systems for records. Fundamentals and vocabulary*; ISO30301:2011 *Information and Documentation, Management systems for records. Requirements*.

4. *The Records Architect* will cover topics relating to Information Management and Information Architecture, including technology issues. S/he will take care that Records Management is integrated into general information policies on all levels (strategy, structure and operations) and will also be concerned with issues relating to security, interoperability, the cloud and privacy;
5. *The Records Capture Officer* will be responsible for carrying out the ingest of records into the appropriate information systems, as described in ISO 14721;
6. *The Records Preservation Officer* will be responsible for preservation, data management, retention and disposal as described in ISO 14721;
7. *The Records Accessibility Officer* will be responsible for keeping records available in whatever ways are necessary and desirable, as described in ISO14721;

In the ever increasing complexity<sup>48</sup> of the world behind easy-to-use devices and the growing amount of available information, there is not yet a new point within reach where our profession and its environment will be stabilized and where paradigms, concepts and instruments are crystallized. The place in the infosphere of what we call Records Management is certainly not fixed yet. However, it is certain that the profession of Records Management is changing as never before. As in Baricco's *Barbari*, these changes are not about simple adaptations to gradual developments or shifts, but a fundamental transformation. Our very being is undergoing a radical transformation.

In a moment like this I get the urge to understand it. I do not know but maybe it has to do with this strange thing that I have been short of breath quite often lately and this strange inclination to swim under water for a long time until I finally notice that I have gills that can save me.<sup>49</sup>

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48 HOWARD et al., p. 3.

49 BARICCO, p. 4.