

**The Role of APPRAISAL in the  
National Research Foundation  
(NRF) Rating System: Evaluation  
and Instruction in Peer Reviewer  
Reports**

**Volume 1**

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Master of Arts

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By

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## **Abstract**

This thesis reports on two aspects of interpersonal meaning in peer reviewer reports for eleven researchers in the Animal and Veterinary Sciences awarded NRF ratings in A1, B1, C1 and Y1 rating categories. These aspects are the evaluation of the researcher applying for a rating, and the instruction to the NRF as to the rating the researcher ought to receive. A full APPRAISAL Analysis (Martin & White 2005) complemented by an investigation of politeness strategies (Myers 1989) is used to analyse the reports and show how the various systems of interpersonal meaning co-function and to what effect.

The analysis reveals that there are clear differences between the evaluative and instructive language used in the reports. Those for the A1 rated researchers are characterised by only positive evaluations of the applicant, frequently strengthened in terms of Graduation and contracted in terms of Engagement. Overall there is less Engagement and politeness in these reports rendering them more ‘factual’ than the reports for the other rating categories. The A1 rated researcher is therefore construed as being, incontestably, a leader in his/her field of research, worthy of a top rating. The reports for the B1 and C1 rated researchers are characterised by the increasing presence of negative evaluations. In addition, there are more instances of softened/downscaled Graduation, dialogic expansion and deference politeness, showing that there is more perceived contention about the evaluations made. The reports for the Y1 rated researchers (a category for young researchers) focus on the applicant’s demonstrated potential to become a leader in the field. In addition to a high incidence of negative evaluations, downscaled Graduation, dialogic expansion and deference politeness, the Y1 reports are also characterised by a high incidence of advice and suggestions from the reviewers concerning the applicant’s work and standing.

At a broader level, the analysis reveals that the language used in the reports has a profound influence on the outcome of the rating process. The reports are crucial, not only for evaluating the applicant but, also, more subtly, in directing the NRF towards a specific rating category. It offers insights into what is valued in the scientific community, what is considered quality research, and what leads to international recognition. The research also adds uniquely to current thinking about the language of science and, more particularly, highlights the nuanced understanding of evaluative and instructive language in the reports that is possible if one draws on the full APPRAISAL framework, and insights into politeness behaviour.

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Unless specifically indicated to the contrary in the text, this thesis is my own original work. It has not been submitted for a degree at any other university.

Christine Louise Marshall

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## 1.1 Background to the Research

This research derives from a longstanding interest in the potential of texts to impart meanings well beyond the individual words and the grammatical structures they contain. It is about how the multiplicity of influences on language production, co-textual and contextual, generate meanings ‘between the lines’ and have a real-life impact beyond the text. The extraordinary power of language to shape our perceptions of the world and construe social reality has, since the mid 20<sup>th</sup> century, become of increasing interest to discourse analysts and is the primary motivation for this research. The NRF rating system and the assessments scientists write for their peers is a highly relevant instance of language shaping individual careers, and the research community as a whole. It is a system that has generated a great deal of discussion and debate amongst researchers in South Africa, and is generally recognised as a credible and useful mechanism both for individuals and the South African community to establish their standing internationally. It is also a system that is unique to South Africa, and the recognition and reward of South African researchers plays an important role in nation-building and economic development. As one researcher puts it:

“Although the system is not flawless, it does provide a benchmark, and I think a reasonably objective one, for research standing. The NRF rating system is an important developmental tool that can motivate researchers by getting them to evaluate themselves and open themselves up to evaluation by their peers. This helps to make the South African research system more thoroughly part of the world research system, and this is important for those of us who suffered isolation and exclusion during the academic and cultural boycott. It also helps connect us internationally and encourages us to judge ourselves in international terms.”

**Prof Myrtle Hooper, Assistant Vice-Rector: Research and Community Outreach, University of Zululand** (quote from *NRF Rating Facts and Figures 2007*).

The value of analysing in detail the peer reviewer reports on which the NRF rating system is based, lies in its ability to assess and substantiate the notions of ‘credibility’ and ‘reliability’ in the system. It provides a more precise, linguistically-based justification for the ratings that individual applicants receive, and shows how the NRF Evaluation Centre arrives at a decision concerning an individual’s rating, based on the peer assessment reports. The value of a Systemic Functional approach to the analysis, which I take in this research, is that it is designed to tap into the meaning potential of texts, and concentrate on how our language choices represent and reflect a culture, and a community, and construe particular meanings and interpersonal relationships. A pilot study completed in 2007 (Marshall, Adendorff & de Klerk 2009), which provided a broad perspective on evaluative language used in a limited number of

reports, revealed some very interesting insights into the different ways in which applicants in the various categories are evaluated. It showed that the different rating categories allocated to the applicants could be attributed to a variety of overt and more subtle differences in the evaluative language used in the reviewer reports. More importantly, however, it pointed to the need for a larger and more thorough analysis, hence the current study.

In the sections that follow in this chapter, I provide my research questions (section 1.2), an overview of the theoretical basis for the research and details of the how the NRF Rating System operates (section 1.3), a discussion of the credibility of the rating system (section 1.4) and a brief overview of the data analysed (section 1.5) and the research methods employed (section 1.6). In section 1.7, I provide an outline of the structure of the thesis and the focus of each chapter.

## 1.2 Research Questions

My research aims to answer the following four questions:

1. *Is there a relationship between the types of evaluative language used in the reports, and the rating allocated? In other words, how are the NRF Assessment Panel's final decisions regarding ratings based on the ways in which reviewers' evaluate the applicant, the quality of his/her research, and standing in the field?*

This research question requires a detailed investigation of *what* it is about the applicant and his/her career that is evaluated and *how* it is evaluated i.e. either favourably or more critically, according to the rating category. This investigation is revealed through the APPRAISAL Analysis (reported on in Chapter 4) which distinguishes different kinds of evaluations: those concerning human behaviour and attributes (Normality, Capacity, Tenacity, Veracity, and Propriety), and the qualities of entities or 'things' (Valuation, Composition, and Reaction). It also reveals the ways in which evaluations can be made more or less forceful or precise.

2. *How is evaluative language used in reports to instruct the readers and position them in such a way that they make specific judgements concerning the researcher's personal qualities, the quality of his/her research, and the standing of the researcher in the relevant field?*

This research question focuses on instruction in language: how reviewers engage with their readers, and instruct them to take a specific stance towards the applicant being evaluated.

APPRAISAL Analysis, together with an analysis of the politeness strategies used in the reports reveals the variety of ways in which this is achieved (see sections 4.2 and 4.3). It can also provide insights into some of the conventions of scientific discourse (see Research Question 4), their origins and their function within the scientific community.

3. *To what extent can descriptions of evaluative and instructive language be used to assess the efficacy and consistency of the decisions made by the NRF Assessment Panel?*

I was provided with the ratings the applicants were awarded, together with the peer reviewer reports, and so my analysis does not aim to ‘test’ the NRF Assessment Panel’s decisions as such. However, a comparison between the linguistic features (see Research Questions 1 and 2) in the reports for the different rating categories, and a correlation with the NRF’s criteria for each rating category (see Appendix 2), can effectively make more explicit the role of the reviewer reports in rating individual applicants.

4. *What can the linguistic strategies used by reviewers tell us about the negotiation and preservation of the identity of the scientific community, its values, and interpersonal relations?*

A Systemic Functional approach to the analysis (see sections 2.2 and 2.3) bases the reviewer reports in the situational context and the culture in which they are produced. The results of the APPRAISAL analysis together with an analysis of politeness strategies, is interpreted in the light of literature on the conventions of scientific discourse and the values of the scientific community and research in South Africa (see section 2.4). This provides further insights into the nature of the role of peer evaluation in the negotiation of the identity of the scientific community.

Addressing these research questions also has the objective of adding to the existing body of research in APPRAISAL Analysis and Systemic Functional Linguistics, as well as research on scientific discourse and the scientific discourse community. There has been, to my knowledge, no research in Linguistics on peer evaluation amongst scientists and so the very choice of data promises to contribute original research to the existing literature on the language of science and scientists. This research also aims to provide insights into the workings of the NRF Rating System and the central role of the peer reviewer reports.

### **1.3 Context of the Research**

In order to appreciate fully the critical importance of the peer reviewer reports in the rating system, I feel it is necessary to sketch the context in which they are produced and interpreted. Accordingly, this section (1.3) provides general information about the NRF, its values and its objectives, and an overview of how the rating system works.

#### **1.3.1 The National Research Foundation (NRF)**

The National Research Foundation is a government funded organisation that supports and promotes research and development in South Africa. It assists individual researchers and research organisations by providing funds and facilities, developing skills training and organising human resources. It is responsible for establishing and maintaining a number of large organisations such as The South African Astronomical Observatory (SAAO), The South African Institute for Aquatic Biodiversity (SAIAB), The National Zoological Gardens (NZG) and The South African Agency for Science and Technology Advancement (SAASTA), to name a few. According to its Mission Statement, the vision of the NRF is “for a prosperous South Africa on an African continent that is steeped in a culture of knowledge, free of poverty and its attendant diseases, and proudly contributing to the well-being of humanity” [URL 1]. Its mission is for “a dynamic, quality-driven organisation that provides leadership in the promotion and support of research and research capacity development in the natural, social and human sciences, engineering and technology to meet national and global challenges through:

- Investing in knowledge, people and infrastructure;
- Promoting basic and applied research and innovation;
- Developing research capacity and advancing equity and redress to unlock the full creative potential of the research community;
- Facilitating strategic partnerships and knowledge networks; and
- Upholding research excellence” [URL 1].

The NRF was established in 1999, but it grew out of various organisations that supported research in South Africa from as far back as the 1940s. The first organisation of this kind was the Council for Scientific and Industrial Research (CSIR) which developed into the Foundation for Research Development (FRD) in 1984. It was the FRD that first introduced a rating system for individual researchers based on peer evaluation, but it was only for researchers in the natural sciences, engineering and technology. In 2002, it was opened up for researchers in the social sciences and humanities too.

The NRF rating system was originally designed as part of an attempt to make the allocation of funds more transparent and criteria-based. The basis for the allocation of funds at the time was unsatisfactory for many researchers who felt that they were receiving insufficient funds relative to the importance of their research, and that the criteria for the allocation of funds needed to reflect adequately the priorities for research in post-1994 South Africa, as stipulated by the NRF. The new democracy in South Africa prioritises transparency and accountability in research, and collaborative partnerships, both locally and abroad, that aim to work for the benefit of society and the environment. In order to address the dissatisfaction with the Rating System, it was modified in the 1990s. The aim was to ascertain more accurately which researchers were to receive funding and how much, based on their research accomplishments and commitment to the production of quality research, particularly that which would contribute to the development of skills and industry in South Africa. This system is managed by the NRF Evaluation Centre, and is designed to assess the quality of a researcher's work and his/her standing in the field at both a local and international level. The most reliable means of this assessment is seen to be peer evaluation. Finding the most suitable peers for South African researchers requires, however, the involvement of international peers, a consequence of which is that the rating system has become highly regarded within the international research community.

According to the NRF Mission Statement [URL 2], the objectives of the Evaluation Centre are:

- “To benchmark performance of researchers;
- To appraise programmes/activities considered for NRF support;
- To monitor current evaluation processes in the NRF; and
- To provide an evaluation service to NRF stakeholders and sometimes to stakeholders external to the NRF”.

The responsibilities of the Evaluation Centre include:

- “Evaluation and rating of researchers;
- Provision of relevant information on the standing and rating of researchers to NRF management;
- Providing advice and guidance for programme-based evaluation processes;
- Providing criteria, processes and procedures for programme and institutional appraisals and undertaking selected appraisals;
- Undertaking programme evaluations and reviews; and
- Conducting periodic evaluation of the national research facilities”.

My research will focus only on the first of these: the evaluation and rating of individual researchers. This is a complex and sometimes lengthy process, requiring the involvement of at least two NRF committees in addition to the peer reviewers.

### **1.3.2 The Rating Process**

Ratings are assigned on an annual basis to those researchers who submit an application and documentation for a rating. A successful rating is valid for five years, after which a researcher needs to reapply in order to maintain it and prevent it from lapsing. A rating therefore is based on the previous seven years' work.

Ratings fall into three main 'bands' of categories: the A categories (A1 and A2) which are the highest, the B categories (B1, B2 and B3) and the C categories (C1, C2 and C3) which are the lowest. In addition to these there is the P category for young researchers demonstrating the potential to become well established in a field based on their doctoral/post doctoral work, the Y categories (Y1 and Y2) for young researchers demonstrating the potential to become established researchers within five years of the rating, and the L category for 'late starters': researchers from disadvantaged backgrounds or those who have not had consistent involvement in a research environment e.g. black/female researchers or those involved in higher education institutions who have shown the potential to become established researchers within five years (see Appendix 6 and page 8 for details of the various categories).

It must be noted that obtaining a rating is in itself a highly prestigious and sought after recognition of scholarship. Statistics show that in 2005, only 1501 researchers (9.8% of the total number of researchers in South Africa) were rated and this was the highest number of rated researchers to date (*NRF Evaluation and Rating Facts and Figures 2007*: 4). However, an increasing number of researchers in the period from 2000 to 2007 have not been reapplying for ratings and have allowed them to lapse (Pouris 2007). The reasons given by researchers for allowing this to happen concern the researchers' individual situations for the most part: 23 percent stated that they had allowed their ratings to lapse because they had moved to an employment position that did not involve research and 37 percent had moved away from the research institution. However, 28 percent stated that the lack of financial support from the NRF was what had discouraged them for reapplying for a rating (Pouris 2007). The 2008 review of the rating system addressed the link between a rating and funding, and from 2008, rated researchers can receive between R40 000 and 100 000 per annum depending on the rating

received. The reviewer reports I analysed are from before this period, so the applicants' motivations for applying for a rating must have been mainly for reasons of prestige and recognition within the community.

Although, as I mentioned earlier, there are a number of different rating categories, the ones I focus on in this research are the A1, B1, C1 and Y1 categories. The NRF criteria for researchers falling into these categories are provided in Table 1.1. For a full description of criteria for all the rating categories, see Appendix 6, page 232. Awarding a rating involves matching the evaluations in the reviewer reports with the criteria below, and so in my analysis I examine this correlation as a way of gauging the effectiveness and consistency of the rating system as a whole.

**Table 1.1 Definitions of the A1, B1, C1 and Y1 Rating Categories**

Category	Definition	Sub-category	Description
<b>A</b>	Researchers who are unequivocally recognised by their peers as leading international scholars in their field for the quality and impact of their recent research outputs.	<b>A1</b>	A researcher in this group is recognised by all reviewers as a leading scholar in his/her field internationally for the high quality and wide impact (i.e. beyond a narrow field of specialisation) of his/her recent research outputs.
<b>B</b>	Researchers who enjoy considerable international recognition by their peers for the high quality and impact of their recent research outputs.	<b>B1</b>	All reviewers concur that the applicant enjoys considerable international recognition for the high quality and impact of his/her recent research outputs, with some of them indicating that he/she is a leading international scholar in the field.
<b>C</b>	Established researchers with a sustained recent record of productivity in the field who are recognised by their peers as having: <ul style="list-style-type: none"> <li>▪ Produced a body of quality work, the core of which has coherence and attests to ingoing engagement with the field.</li> <li>▪ Demonstrated the ability to conceptualise problems and apply research methods to investigating them.</li> </ul>	<b>C1</b>	While all reviewers concur that the applicant is an established researcher (as described), some of them indicate that he/she already enjoys considerable international recognition for his/her high quality recent research outputs.
<b>Y</b>	Young researchers (normally younger than 35 years of age), who have held the doctorate or equivalent qualification for less than five years at the time of application, and who are recognised as having the potential to establish themselves as researchers within a five year period after evaluation, based on their performance and productivity as researchers during their doctoral studies and/or early post-doctoral careers.	<b>Y1</b>	A researcher in this group is recognised by all reviewers as having the potential (demonstrated by research products) to establish him/herself as a researcher with some of them indicating that he/she has the potential to become a future leader in his/her field. (Applicants on the borderline between P and Y should be rated at this level.)

### 1.3.3 The Rating Procedure

Table 1.2 below provides a summary of the stages that are involved in the rating process. It provides the most basic route to achieving a rating, assuming that there have been no glitches with the collection of appropriate peer reviewer reports or the assembling of a suitable assessment panel. It also excludes the appeals process where researchers, unsatisfied with the rating they receive, can request a reassessment of the reports by the NRF. This is because it does not apply to any of the researchers whose reports I analysed and is not relevant to any of the research questions. What follows the summary is a more detailed description of each stage.

**Table 1.2 Stages Involved in the Rating Process**

<b>Stage 1</b>	The NRF receives rating applications from individual researchers.
<b>Stage 2</b>	Applications are screened by the NRF.
<b>Stage 3</b>	Should the application be accepted, potential reviewers and members of the Specialist Committee are appointed by the NRF Evaluation Centre.
<b>Stage 4</b>	Potential reviewers are approached by the Evaluation Centre and requested to provide an evaluation of the applicant and his/her work.
<b>Stage 5</b>	Reports are received from the reviewers and screened for suitability. More potential reviewers are approached should there not be at least 6 suitable reports for each applicant.
<b>Stage 6</b>	The final set of reports is submitted to the Specialist Committee, the Chairperson of the Assessment Panel and an independent assessor. The three parties assess the reports separately and make an initial decision concerning a rating.
<b>Stage 7</b>	The Assessment Panel convenes and rates the reports according to their suitability, decides on a final rating for the applicant and identifies feedback that may be useful for the applicant.
<b>Stage 8</b>	B, C and Y ratings are finalised, A ratings are referred to the EEC and should there be disagreement amongst members of the Assessment Panel concerning a rating, the case is also referred to the EEC.
<b>Stage 9</b>	The outcome of the evaluation process is communicated back to the applicant through his/her institution.
<b>Stage 10</b>	Should a researcher wish to appeal against his/her rating, an application can be submitted to the Evaluation Centre for a review by the Appeals Committee.

**Stage 1:** An individual researcher submits documentation for the application for a rating. All applications must be screened and then submitted electronically by the institution at which the applicant is based. The application form (see Appendix 4, page 213), requires details of the applicants' research from the past seven years (past eight years since 2009): the impact of their work, their conference participation, their teaching/supervision record, a description of their current research and finally, a self assessment and motivation for a rating. Applicants are also required to provide a list of names of peers whom the NRF can approach as potential reviewers, as well as names of peers they would not wish to review them. In addition, applicants are given

the opportunity to select the most appropriate NRF specialist panel for the assessment of their area of expertise. This is particularly important for researchers whose work covers a number of overlapping fields.

**Stage 2:** Applications are received by the NRF Evaluation Centre and then screened to ensure that they are complete. The NRF also checks the applications for their potential for success in the rating process. Those that appear to be weak or premature are returned to the applicant's institution with the request that they are resubmitted once they have been strengthened or once applicants have gained more experience in the field. Applications that are accepted proceed to the next stage. It is mostly a lack of sufficient detail for the full period under review that results in applications being returned.

**Stage 3:** Once an application has been accepted, the Evaluation Centre identifies peer reviewers for each applicant and suitable members of the specialist committee. For each applicant, a minimum of six suitable peer reviewer reports are required. The Evaluation Centre aims to compile a set of reports, half of which are from the list of reviewers provided by the applicant and half by reviewers approached by the Evaluation Centre's Specialist Committee. Arriving at six suitable reports is not always be a simple process: reviewers may refuse to comply either because they do not wish to participate or do not feel qualified to provide a report, or the reports provided may be superficial or contain insufficient detail. Members of the Specialist Committees are selected by the Evaluation System not only for their reputation as researchers and expertise in their fields but also for their wisdom, integrity, and familiarity with the system.

**Stage 4:** Written requests for the submission of reviewer reports are sent to potential reviewers together with details of the applicant and his/her self evaluation and motivation for a rating. Reviewers are requested to structure their reports according to three main sections (see Appendix 5, page 230): reviewer's knowledge of the applicant, evaluation of his/her past research outputs (over the last 7 years) and estimation of his/her standing in the field, nationally and internationally. Reviewers are not informed of the specific NRF rating categories and are thus not asked to specify which rating they believe the applicant should receive.

**Stage 5:** Reviewer reports, once received, are screened by the NRF Evaluation Centre for acceptability. Suitable reports demonstrate knowledge of the applicant, familiarity with his/her

work and include a sufficiently detailed discussion of this work and the applicant's standing within the field. Should there be insufficient suitable reports, further reviewers are approached.

**Stage 6:** Reports are submitted to the Assessment Panel which consists of three parties that are primarily responsible for the allocation of a rating: the Specialist Committee (6 members), the Chairperson of the Assessment Panel and an independent assessor. The Specialist Committee comprises experts in the particular applicant's field/s of research, some of whom may have been suggested as suitable assessors by the applicant. The others will have been selected by the NRF. The Chairperson of the Assessment Panel and the independent assessor are the two parties unfamiliar with the applicant's field of research and are appointed by the NRF. The Assessment Panel is therefore a mixture of experts and non-experts, and its responsibility is to assess the set of reports for an individual applicant and come to a conclusion concerning the rating the applicant should receive.

**Stage 7:** The three parties review the reports separately and then convene to compare the ratings they have decided upon. The objective of this meeting is to:

- a) Grade the peer reviewers' reports according to their suitability. Gradings for the reports should be based on the amount of factual information contained in the reports, and evidence that the reviewer is indeed familiar with the applicant and his/her work and is therefore well placed to act as a reviewer (see Appendix 7, page 234);
- b) Finalise the applicant's rating and;
- c) Identify any feedback from the reports which may be useful for researchers.

**Stage 8:** This stage depends upon the outcome of the meeting of the assessment panel:

- a) If consensus is not reached amongst assessors, the case is referred to the Executive Evaluation Committee (EEC),
- b) If it is decided that the applicant should receive an A or P rating, the case is again referred to the EEC,
- c) If it is decided that the applicant should be rated under the L category, the case is referred to the L committee,
- d) If it is decided that the applicant should receive a B, C or Y rating, the rating is finalised by the assessors' panel without any referral.

The EEC consists of the NRF president and vice-president, the NRF Executive Director, the Chairpersons of the Assessment Panels and two convenors of the Assessment Panels. The EEC has a variety of functions but the relevant function here is to address cases which are not resolved by the Assessment Panel. A ratings, presumably because they are the highest, are referred to this committee because an additional monitoring system is needed. Only researchers of the highest quality receive A ratings and, in 2005, only 61 researchers in South Africa were rated as such.

**Stage 9:** Once the committee processing the applications has made a final decision, the outcome of the evaluation process and any feedback is communicated to the application via his/her institution, and the process is complete.

#### **1.4 Aiming for Validity and Consistency in the NRF Rating System**

The NRF prides itself on a system that rates researchers fairly and consistently, based on the evidence from applicants' peers and in the relevant field of research. There are also several systems in place to safeguard the credibility of the process. The Executive Evaluation Committee functions as an additional assessment panel, sometimes required when the Specialist Committee, Chair of the Assessment Panel and Independent Assessor are unable to reach consensus regarding an application. The Appeals Process which gives rated researchers the option of appealing against the rating awarded should they feel it does not accurately reflect their standing and quality as researchers. The focus of this section, however, is the nature of the 'evidence' provided by the peer reviewer reports, and how the NRF seeks to collect the 'best' evidence possible so that it can assign a fair rating that places the applicant accurately amongst the hierarchy of researchers in his/her research field.

What is considered by the NRF to be the most appropriate evidence of a researcher's standing amongst his/her peers and impact and quality of the research can only come from 'experts' i.e. those most familiar with the applicant and his/her work and most knowledgeable about the applicant's field of research and the relative standings of those working in it. In the reports we therefore find both 'facts' (such as publication output, conference attendance, the types of journals the applicant publishes in, the applicant's teaching record, etc.) and 'opinions' (what the individual reviewer thinks of the quality of the applicant's work, how he/she compares with other researchers in the field, etc.). This combination of subjective and objective evidence (the opinion of the expert together with facts) as fundamental to the validity of the NRF rating

system is representative of an ‘evidence-based’ approach. The evidence-based movement, originating in 19<sup>th</sup> century France, has been recently rejuvenated with the shift towards a knowledge economy, and research focussing on decision-making that affects the lives of individuals and society, based on ‘evidence’ (Volmink 2006). The concern of evidence-based approaches is the problematic nature of ‘evidence’ which, rather than being something purely empirical, objective and beyond dispute, is in fact highly variable, and its value is relative to the culture or context in which it is produced. Research into the nature of ‘evidence’ produced and considered permissible in the South African judicial system shows that ‘experts’ play a vital role in guiding the decision of the court by complementing ‘objective facts’ with ‘expert opinions’ (Illsey 2006). These opinions are valued because the expert is regarded as having the appropriate knowledge of and standing in a specific area, thus validating his/her credibility and reliability to produce the ‘right’ kind of evidence.

Similarly, in the NRF rating system, the expert opinion of the reviewers is regarded as valid because it provides the NRF Assessment Panel with information they do not have at their disposal and which is not found in the applications submitted by the applicants (see Appendix 4) and is therefore instrumental in instructing the Panel to assign a particular rating. With the recognition of expert opinion as culturally and contextually specific, however, this kind of evidence has been subject to some questioning concerning its reliability in the judicial system, (Illsey 2006), leading to a call for more standardised evidence-based practices. Amongst scientific researchers we find a similar scepticism: the very fact that there is an Appeals System suggests that some rated researchers do not accept the opinions of their peers. Whereas the ‘facts’ (such as lists of publications, etc.) cannot be disputed, the reviewers’ opinions can be more controversial.

The NRF attempts to address this problem by seeking out the reviewers best placed to assess the applicant. This involves contacting potential reviewers both from the list provided by the applicant (see Appendix 4) and those recommended by the Specialist Committee on the Assessment Panel (see previous section, Stage 3). In order to obtain between five and eight suitable reports, the NRF approaches a number of potential reviewers (often more than ten) both within South Africa and abroad. For Science and Engineering (which includes Animal and Veterinary Sciences, the focus of this research), approximately 75% of the reviewers are from institutions abroad (*Evaluation and Rating: Facts and Figures 2007: 21*). This is especially important for estimating the standing of the applicant within the international community of

scientists. As one A1 rated South African researcher at the University of Cape Town, Tim Noakes (Exercise and Sports Medicine), has said:

“We can be a little parochial in South Africa, and easily suppose ‘if I’m the best researcher in Rondebosch, then I must also be the best in the world.’ The thoroughness of the NRF rating system provides a valid measure of how far each of us still has to go to be internationally competitive and relevant. It correctly establishes the benchmark as “world class” (*Evaluation and Rating: Facts and Figures 2007: 18*).

An aim of this research, as indicated in Research Question 3, is to provide some linguistic ‘evidence’ that can be used to complement the expert opinions in the peer reviewer reports, and substantiate the Assessment’s interpretation of the reports and correlation with the criteria that must be met for a researcher to be rated in each category (see Table 1.1) as stipulated by the NRF. In this way, the analysis can provide some evidence-based linguistic standards for the rating system.

### **1.5 The Texts Analysed for this Research**

From the overview of the NRF rating system provided in the previous section, it is clear that the peer reviewer reports are central to the rating process, and the outcome for individual applicants. Professor Vivian de Klerk, a linguist at Rhodes University, when acting as an independent assessor (see previous section, Stage 6) for the NRF Evaluation Centre, observed the critical role of the language used in the reports and, in keeping with their support for research facilitation in South Africa, the NRF Evaluation Centre, agreed to allow her access to the data. My supervisor, Professor Ralph Adendorff, after reading some of the data, passed it on to me, aware of my interest in APPRAISAL and interpersonal meanings in language. This data I analysed first for a pilot study (Marshall, Adendorff & de Klerk 2009) followed by further data for a larger analysis of the reports, recorded in this thesis. In Table 1.3, I provide some basic information about the reports I have analysed for this research. A more detailed discussion can be found in Chapter 3 (Research Methods), section 3.2.

**Table 1.3 General Information about the Data: The Applicants and their Ratings, their Fields of Specialisation, the Number of Reports Provided, and the Average Length of the Reports for each Rating Category.**

Applicant Number (assigned by the NRF)	NRF Rating Awarded	Broad Field of Specialisation	Number of Peer Reviewer Reports	Average Length of reports for each rating category
Applicant 12	A1	Thermal Physiology: Temperature Regulation, Fever, Pain and Sleep in Large Mammals.	8	700 words
Applicant 100	A1	Marine Ecology: Coastal Ecosystems and Marine Conservation.	7	
Applicant 16	B1	Entomology and Invertebrate Conservation Biology in Terrestrial, Freshwater and Marine Ecosystems.	8	542 words
Applicant 22	B1	Conservation Planning and Biodiversity Assessment.	6	
Applicant 101	B1	Reproduction, Socio-Biology and Physiology in African Mole Rats.	8	
Applicant 3	C1	Marine Science: Estuaries and Southern Ocean Ecosystems.	7	704 words
Applicant 15	C1	Earthworms and Terrestrial Ecotoxicology.	5	
Applicant 102	C1	Veterinary Diagnostic Imaging and Radiology.	7	
Applicant 4	Y1	Thermal Physiology: Brain Temperature in Large Mammals.	5	602 words
Applicant 7	Y1	Phylogeography and Conservation Genetics.	8	
Applicant 8	Y1	Crustacean Endocrinology.	9	

## 1.6 Methods of the Research

As mentioned earlier in this chapter, my approach to the analysis of the reports involves a Systemic Functional perspective (Halliday 1985/1994) on language, and utilises the APPRAISAL Framework (Martin & White 2005), together with an analysis of politeness strategies (Brown & Levinson 1978, Myers 1989). Systemic Functional Linguistics is currently the most useful framework for understanding and analysing the way we use language to represent our experiences of the world and to negotiate relationships with one another in a coherent or organised manner. It is based on the notion of language as a set of systems that are a resource for speakers, who choose different options from the system according to the function or context. APPRAISAL Analysis is about interpersonal meanings and being “concerned with evaluation: the kinds of attitudes that are negotiated in a text, the strength of the feelings involved and the ways in which values are sourced and readers aligned” Martin & Rose (2003: 22). It prioritises the meanings generated by texts over their lexical and grammatical make up,

and specifically meanings that serve to evaluate, instruct and engage readers and writers in a dialogue. The APPRAISAL Framework is divided into three systems for investigating interpersonal meanings (see section 2.3 for more detail): Attitude, which is about different types of evaluative meaning, Graduation, which is about the linguistic resources used to make evaluations more or less forceful or more or less precise, and Engagement, which is about the linguistic resources used for the presentation and negotiation of reader/writer stance. APPRAISAL is a fairly recent development within Systemic Functional Linguistics, and its continuing expansion makes it a highly detailed tool for analysing interpersonal meanings, but one still open to refinement. Because Systemic Functional Linguistics and APPRAISAL Analysis draw heavily on the context of a text's production in order to understand the variety of meanings construed within it, my addition to the APPRAISAL Framework integrates research methods from work in pragmatics, and specifically written scientific discourse. I have included into the APPRAISAL Analysis an analysis of politeness strategies, based on Brown & Levinson's (1978) work on politeness in conversation and Myers's (1989, 1992) work on politeness in written science. This is a unique linkage that has not been made in any previous research and its value lies in its ability to substantiate the analysis of Engagement in particular, and allow for a more thorough and context-based explanation of why certain Engagement strategies are used in certain contexts and to what effect.

## **1.7 An Overview of the Structure of the Thesis**

This thesis is structured into five chapters: the Introduction, Literature Review, Research Methods, Research Findings and Discussion, and Conclusion. It has been bound into two volumes, the first containing Chapters 1-5 and Appendices 1-3, and the second volume, Appendices 4-29. Details of each chapter and the appendices follow in this section, and conclude this chapter.

Chapter 2, the Literature Review, is organised into three main sections. Section 2.2 is about Systemic Functional Grammar, the theoretical foundation for the research. I explain the perspective on language it propounds, and the fundamental importance of interpersonal meanings both for this analysis and more generally. Section 2.3 provides a full description of the APPRAISAL Framework, including some of my own modifications, a discussion of some of the challenges it presents, and how the three systems, Attitude, Graduation and Engagement can combine in text analysis. Section 2.4 addresses the context of the culture in which the peer reviewer reports are produced i.e. the scientific community. I survey the literature on scientific

discourse, drawing attention to what it contributes to my analysis, but also to where it is lacking, and how my analysis provides an original contribution to the literature. In this section I propose, as mentioned earlier, the integration of politeness strategies (Brown & Levinson 1978, Scollon & Scollon 1983, Myers 1989) and APPRAISAL Analysis, a unique combination which emphasises the correlation between the evaluative language used in the peer reviewer reports and the politeness conventions of scientific discourse.

The research methods I employed are explained in Chapter 3. In sections 3.2 and 3.3, I provide details of the reports I analysed and justify Systemic Functional Grammar and APPRAISAL as the most appropriate approach. Section 3.4 is a detailed account of how I undertook the APPRAISAL Analysis, with the inclusion of politeness strategies. It also includes the guidelines necessary for reading the tabular APPRAISAL Analyses (found in Appendices 19-29), and a record of and justification for the methodological decisions I made in order to make the analysis more accessible and comprehensive.

Chapter 4, Research Findings and Discussion, makes a return to the central themes and objectives of this thesis. Section 4.2 focuses on the role of evaluative language in the peer reviewer reports, what is common to all the reports (section 4.2.2), and what distinguishes them from one another according to rating category (section 4.2.3). Section 4.3 focuses on instructive meanings in the reports, again looking at what is common to all the reports and what is particular to each rating category (section 4.3.3). In section 4.3 I also examine the multiple roles that reviewers take on (i.e. an ‘authority’, a ‘servant’ and a ‘persuader’) in order to instruct and align the readers (section 4.3.2). For each of the main chapters in this thesis, i.e. Chapters 2, 3 and 4, I have included a contents page and list of tables and figures for the relevant chapter at the beginning of each, as an aid to the reader.

In the conclusion, Chapter 5, I show what my analysis has achieved, from both a theoretical and an applied perspective, and the extent to which it has provided answers to the research questions. I also consider some of the limitations of the research, and the avenues for further research it affords.

Appendices 1-3 are summaries of the APPRAISAL Analysis, each taking a different perspective on the data. Appendix 1 (on coloured paper for ease of access) is a quantitative summary of the data to which I refer frequently in Chapter 4. Appendix 2 is a summary of the role of each

APPRAISAL category in the data, based on my analysis, and provides the most detailed comparison of the APPRAISAL Analyses of the reports for each rating category. The comparison is in tabular format in order to facilitate comparison between the rating categories. In both Appendix 1 and 2, I shade the information for the A1 and C1 applicants in order to make the extensive tables more accessible for the reader. Appendix 3 is also a summary in tabular format that takes a theme-based perspective on the data. It is designed to be accessible to non-linguists and to function as a possible guide to members of the NRF Assessment Panel when allocating ratings.

The second volume of this thesis contains Appendices 4-29. Appendices 4-7 contain information about the NRF rating system, Appendices 8-18 are the peer reviewer reports analysed for this research and Appendices 19-29 are the tabular APPRAISAL Analyses of the reports (see Chapter 3 for details). I have included the tabular analyses because they provide the basis of the research findings but throughout the thesis I provide examples from the data, together with the different APPRAISAL categories they instantiate. It is therefore unnecessary for the reader to attempt to read through the tabular analyses or to refer to them in order to follow the discussion of the research findings in Chapter 4.

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## **2.1 Introduction**

This chapter consists of three main sections which provide the theoretical basis for the research, Systemic Functional Linguistics (hereafter SFL), APPRAISAL Analysis, and the genre of scientific discourse to which the peer reviewer reports belong. Section 2.2 addresses the fundamentals of SFL, which provides the foundation of this thesis. I explore the fact that language is a *resource* for constructing meaning and that grammar enacts *functions*; that grammar is a highly complex *system* or sets of systems from which we make choices and in doing so perform functions and construe meanings; that meanings are also *structured* into recognisable patterns across texts, which is pertinent for the establishment of *genres*; and introduce APPRAISAL as located within the *interpersonal* metafunction, which is about construing reader-writer relationships through language. Section 2.3 provides a detailed account of APPRAISAL Analysis and the three aspects of interpersonal meanings it addresses: Attitude (evaluative meanings), Graduation (resources for adjusting force and precision of evaluations) and Engagement (resources for entering into a dialogue with an audience). In the course of this, I refer to APPRAISAL research findings that are pertinent to my own work. Section 2.4 deals with the scientific community and various kinds of scientific discourse. This is because I view the scientific community associated with the NRF rating system as a ‘discourse community’, its norms and values being construed through the discourse. I identify the peer reviewer reports as a genre of science and show viewing this as such both informs and enriches the APPRAISAL Analysis, which I report on in Chapter 4. From an SFL perspective, what I am dealing with is one of the ‘micro-genres’ (akin to written research articles, popular science articles, conference presentations, etc) which constitute the ‘macro-genre’ of science. However, since my goal is not to define its generic properties, I shall refer to both the macro- and micro-genres of science, including the peer reviewer reports, as ‘scientific discourse’.

## **2.2 Systemic Functional Linguistics**

### **2.2.1 Introduction**

Systemic Functional Linguistics is a theory of grammar and approach to discourse analysis pioneered by Michael Halliday (e.g. 1975, 1976, 1978, 1985/1994, Halliday & Hasan 1985, Halliday & Matthiessen 1999/2004) from which APPRAISAL Analysis (Martin 2000, Martin & Rose 2003/7, Martin & White 2005), the primary analytical framework for this research, is extended. As mentioned earlier, a functional perspective on grammar views language as a resource rather than a set of rules, and as comprising systems and structures that can be selected in order to fulfil communicative functions. For Halliday, grammar and function are inseparable: “it is the demands posed by the service of these functions which have moulded the shape of language and fixed the

course of its evolution” (Halliday 1978: 22, cited in Bloor & Bloor 2004: 11). Language is therefore viewed as a ‘social semiotic’ “whereby social reality is shaped, constrained and modified” (Halliday 1978: 126). Taking ideas from influential work by Malinowski (1922) on the social and situational context in which language is produced, and by Firth (1957) on the notion of language as a meaningful selection from a wide range of options, language is seen as organised into system networks. These are sets of interrelated ‘either-or’ options, or as Halliday puts it, “a set of options together with an entry condition, such that if the entry condition is satisfied one option from the set must be selected” (Halliday 1972, cited in Bloor & Bloor 2004: 245). Systems of meaning predominate in SFG and APPRAISAL and are the basic tools for analysis (Martin & White 2005). This approach can also be referred to as a *typological* perspective whereby grammar can be classified and taxonomised into sets of categories (Martin & Matthiessen 1991, Martin & White 2005) (see Figure 2.2 for the system categories under APPRAISAL). In addition to systems, although not playing quite so prominent a role, is a *topological* perspective of grammar where meanings are arranged in continuums or clines. This relates to patterned structures which stretch across texts rather than being confined to the clause (*ibid*). The importance of taking both a typological and a topological approach to the analysis is discussed in further detail in sections 2.2.4.1 and 2.2.4.2.

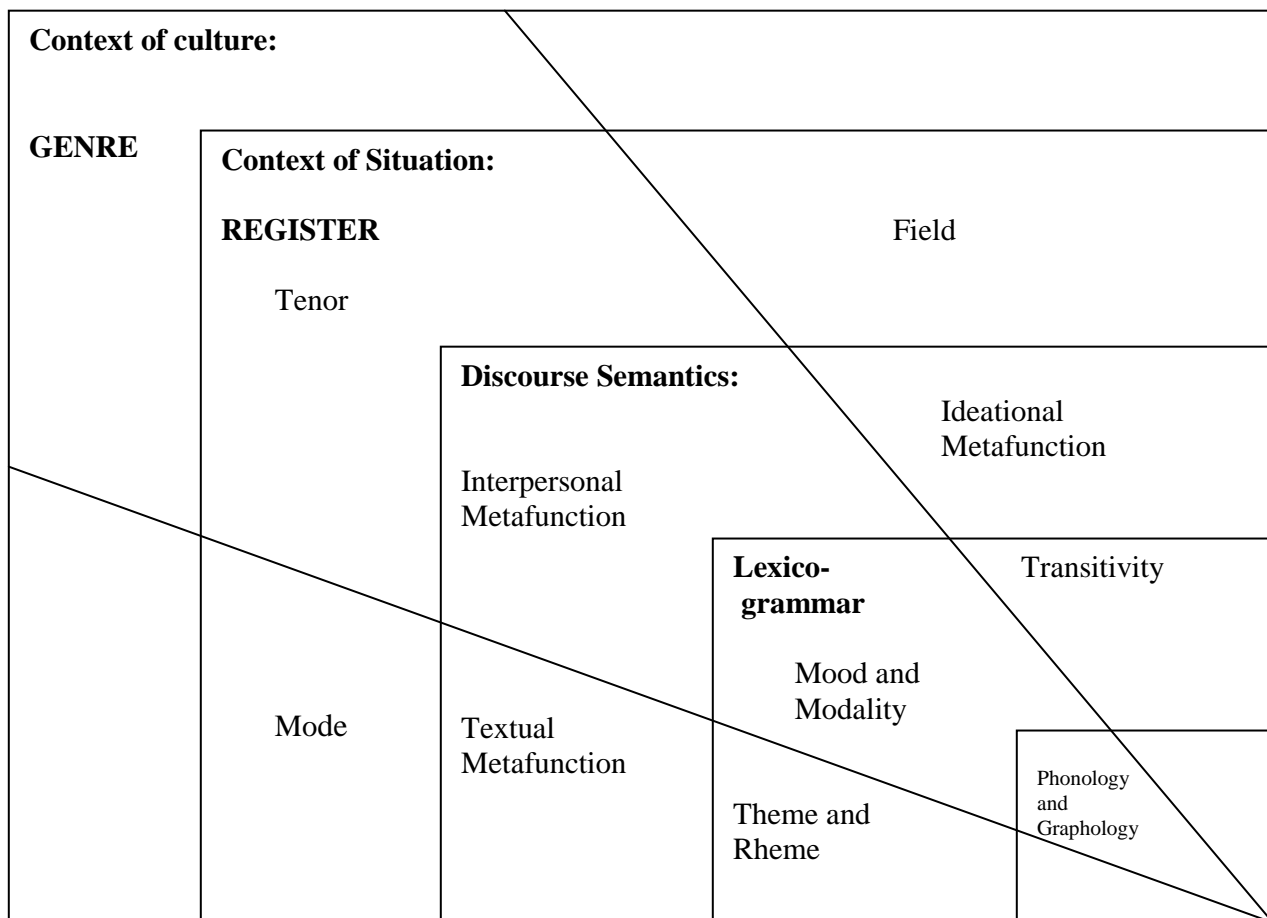
In what follows, I enter into a more detailed discussion of Halliday’s model for SFL analysis, and the various interpretive dimensions it affords for the analysis of texts (where ‘text’ refers to any instance of authentic language in use, either written or spoken (Halliday & Matthiessen 2004)), including the different systems and structures associated with each dimension. I also make specific links with my own research so as to contextualise it in terms of the literature.

## **2.2.2 Systems of Meaning: Metafunctions and Levels of Realisation**

The model devised by Halliday (1985/1994, Halliday & Matthiessen 1999/2004) in order to explore the functions enacted by grammar involves a simultaneously multi-perspective and multi-layered view of language ranging from more general (i.e. genre) to more specific (i.e. phonology/graphology) realisations of meanings. A representation of this model (based on Halliday & Matthiessen 2004) is provided in Figure 2.1. To allow for more specificity when referring to ‘functions’ of language, three metafunctions are identified: the *ideational* (resources for construing experience), the *interpersonal* (resources for negotiating relationships) and the *textual* (resources for organisation and coherence of meanings). This division is based on the presence of three identifiably separate systems at the lexico-grammatical level (transitivity, mood/modality and theme/rheme), which co-function but are independently variable (Martin 1992). The metafunctions

are considered in terms of their manifestations at a number of levels: phonological and graphological realisations, the lexico-grammar (grammatical structures within clauses and clause complexes), discourse semantics (situated meaning), register (the situational context of the text's production) and the genre (the cultural context). Phonology and graphology constitute the 'expression plane', lexico-grammar and discourse semantics the 'content plane' and register and genre the 'context plane' (Halliday & Matthiessen 2004: 25). In my research I focus only on the content and context planes, as the written texts I analyse are not varied enough in their graphology to warrant an analysis at this level, nor convey any interpersonal meanings relevant to the APPRAISAL Analysis and research questions. So in the following section, I discuss the content and context levels of Halliday's model and how they realise the various metafunctions as systemised and structured meanings. Because my research centres on interpersonal meanings, I provide a more detailed discussion of this metafunction in section 2.2.4. Even though an analysis of the ideational and textual metafunctions is not included in my research, it is important to be aware of their presence as they are dimensions of meaning that provide the anchor for interpersonal meanings.

**Figure 2.1 Halliday's Model for Systemic Functional Linguistics**



### 2.2.2.1 The Content Plane: Discourse Semantics and Lexico-grammar

The discourse semantics and lexico-grammar constitute the ‘content plane’ involving the generation of meanings, and their grammatical and lexical realisations. Their interrelatedness, according to Halliday & Matthiessen (2004: 25, italics added), is that discourse semantics is where “experience and interpersonal relationships are transformed into *meaning* [and lexico-grammar is where] meaning is further transformed into *wording*”. The **ideational** metafunction (which can be subdivided into the experiential and the logical) concerns the linguistic resources for construing our perception of reality and our experiences. The choices involved at the lexico-grammatical level are organised around *processes* (verbal groups - they tell us what the clause is about), and include *participants* (nominal groups - the people or entities participating in the ‘process’), and *circumstances* (prepositional and adverbial groups - the situation/condition in which the ‘process’ occurs). Different types of processes, participants and circumstances as well as their internal variations can be specified according to their function within the clause (see Halliday 1985/1994, Halliday & Matthiessen 1999/2004 for more), for example:

- I have visited South Africa: *I* [participant: Actor], *have visited* [process: material] *South Africa* [participant: goal];
- I like her self-evaluation: *I* [participant: sensor] *like* [process: mental] *her self evaluation* [participant: phenomenon];
- She is an established researcher: *she* [participant: carrier], *is* [process: relational attributive] *an established researcher* [participant: attribute].

An analysis of the types of processes and participants in texts can be revealing of how the grammar encodes our experiences and perceptions of reality, and can be instrumental in causing them to change or be modified. Work in Critical Discourse Analysis (see Fairclough 1992, 2001, Wodak & Chilton 2005) for example, uses analyses such as these with the aim of exposing the ideologies that generate certain ideational meanings where they are repressive and disempowering, for the purposes of emancipation and social change. The **interpersonal** metafunction concerns interaction and exchange: how we use language to negotiate relationships, and to exchange information (propositions) and goods and services (proposals) (Halliday & Matthiessen 2004). In terms of lexico-grammar, this involves Mood and Modality (see 2.2.4.1 for more detail). This perspective on the grammar can provide insights into the relationship between the grammar, and the interpersonal meanings and reader-writer relationships they construe. APPRAISAL Analysis is designed for understanding interpersonal meanings, so I will address the interpersonal metafunction in more detail in section 2.2.4. Finally, the **textual** metafunction is about organising and making coherent the ideational and interpersonal meanings and this is realised in the lexico-grammar as theme and rheme choices (Halliday & Matthiessen 2004). The theme is the starting point of the clause, the initial constituent, and the rheme is the remainder of the clause. A variety of different themes and

rhemes can be specified (see Halliday 1985/1994, Halliday & Matthiessen 1999/2004 for more), for example:

- I have read her work: *I* [topical theme] *have read her work* [rheme];
- Perhaps he does not realise it: *Perhaps* [interpersonal theme] *he* [topical theme] *does not realise it* [rheme];
- However, I believe that...: *However* [textual theme] *I* [topical theme] *believe that...* [rheme], etc.

As these examples show, there can be multiple themes in a clause, foregrounding either an ideational, interpersonal or textual meaning, and this is pertinent for establishing coherence and cohesion within texts (see following section on the periodic structure of textual meanings). This perspective on the lexico-grammar reveals the logical links we make in order to organise meaning conceptually as well as grammatically.

### **2.2.2.2 The Context Plane: Register and Genre**

The context plane, the register and the genre of a text, provides the basis for semantic and lexico-grammatical choices we make. Register relates to the influence of the situational context and is defined as “variation according to use” (Halliday & Hasan 1985, cited in Thomson 2004: 40) and that “we typically use certain recognisable configurations of linguistic resources in certain contexts” (Thomson 2004: 40), configurations also known as ‘keys’ or ‘syndromes of choices’ (Martin 2000, 2003). The variables at the level of the register involve the *field* (ideational variation), the *tenor* (interpersonal variation) and the *mode* (textual variation). So it is the subject matter of the *field*, the *tenor* of the participants and their interpersonal relationship, and the *mode* of the discourse i.e. whether it is written or spoken, that affects discourse semantic and lexico-grammatical relations. In my research this corresponds to the rating process: we have assessment reports (field) written by reviewers for the Assessment Panel and a perceived wider audience of scientists (see section 2.4) (the tenor) in the form of written peer reviewer reports (the mode). How the register, and in turn the content plane varies, for what reason and to what effect is, on a broader level of semiosis, determined by the context of the culture in which they are realised, referred to in SFG as the genre. Concisely put by Thomson (2004: 42) genre is “register plus purpose”, the ‘purpose’ being culturally and ideologically conditioned. Recent work on the development of our understanding of genre has been carried out by a group of functional linguists in Australia (see Martin & Christie 1997, Christie 2002) towards developing genre-based literacy programmes for use in schools, and their view of genre is as a “staged, goal oriented social process” (Martin & White 2005: 32). In my research, this would refer to the general purpose and outcomes of the rating system not only for the applicant, but also for the reviewers, the scientific community of which they are a part, and the NRF and research development in South Africa.

### 2.2.3 Structures of Meaning

So far, I have been dealing with systems of meaning, a typological perspective which focuses synoptically on language use i.e. on isolated structures that are categorised into discrete categories. In order to understand the influence of the context plane however, it is also necessary to adopt a *dynamic* perspective, where meanings unfold and develop through the course of a text, and where meanings are *structured* topologically i.e. along clines rather than discrete categories. Halliday (1979, see also Martin 1997, Martin and White 2005) associates different structures of meaning with the different metafunctions. The structure associated with ideational systems is a ‘particulate’ one which “organises text segmentally, into either orbital or serial patterns” (Martin & White 2005: 17). In the latter instance, one central structure has a number of ‘orbits’ which in the text are all extended from the central structure (see Christie 2002 for an example of orbital genre structure in classroom discourse analysis). In the former, segments follow on from one another serially without any central segment. An orbital structure in the lexico-grammar can be seen in the clustering of participants and circumstances around a process, or modifications clustering around the head of a constituent (Martin & White 2005: 18). A serial structure can be seen in clauses that project (e.g. *I think...*) or finite verbs followed by a predicator within the verbal group (e.g. *have been running*) (Martin & White 2005: 19). The structure of interpersonal meanings is seen as ‘prosodic’ (a concept taken from Firth’s 1964 work on prosody in phonetics) where meanings are “strung throughout the clause as a continuous motif or colouring ...[and] the effect is cumulative” (Halliday 1979, cited in Martin & White 2005: 19). Prosodic structures are highly relevant to APPRAISAL Analysis and this research and are discussed in more detail in section 2.2.4.2. Finally, ‘periodic’ structures are associated with textual meanings. These structures are ‘waves’ of meaning: “a rhythm of peaks and troughs, as the demands of information flow prescribe” (Martin 1997: 17). An example of this can be seen in concessions, where a *sure...but...or admittedly...however...* system realisation, results in a structure of meaning in the form of opposing waves. Although SFG and APPRAISAL Analysis prioritises a typological perspective, it does also allow for a topological perspective and this represents an important shift from analysis within the clause, focussed on lexico-grammar, to analysis ‘beyond’ the clause, focussed on discourse semantics. This shift is fundamental to APPRAISAL and is addressed in more detail in section 2.3.

In the following sections, I focus my discussion on the interpersonal metafunction and the interpersonal meanings APPRAISAL seeks to explore. Although, as I mentioned earlier, this is only one perspective from which the data could be analysed, it is probably the most important for the peer reviewer reports. The reports’ primary function is an interaction between reviewers and the

assessment panel, to engage in a dialogue, and to express attitudes and evaluations, all with the purpose of being persuasive and building solidarity and group membership with the community of scientists and supporters of research in South Africa. In order to understand the NRF rating system and the discourse conventions of the scientific research community better, our attention needs to be on the interpersonal meanings found in the reports.

## 2.2.4 The Interpersonal Metafunction

In this section, I explore the interpersonal metafunction from both Hallidayan and more recent APPRAISAL-based perspectives. Section 2.2.4.1 is about Mood and Modality, the realisation of system at the level of the lexico-grammar. The system of APPRAISAL, which extends into the level of discourse semantics, is discussed in detail in section 2.3. Section 2.2.4.2 is about structures of interpersonal meaning, the notion of prosody (mentioned in the previous sections) and how it has informed the current model of APPRAISAL.

### 2.2.4.1 A Typological (Systemic) Perspective: Interaction as Exchange

The traditional Hallidayan (1985, 1994, Halliday & Matthiessen 2004) perspective on the interpersonal metafunction is confined to lexico-grammatical realisations of mood and modality within the clause (see also Martin 1992). From a syntactic perspective, **Mood** refers to the positioning of the Subject and Finite (tensed form of the verb) in the clause and the effect this has on the structure produced. For example: A declarative will have the Subject followed by a Finite (*He* (Subject) *dived* (Finite) *into the pool*); in an interrogative, their positions are reversed (*Did* (Finite) *he* (Subject) *dive into the pool?*); and an imperative will be without Mood realisation (*Dive* (Predicator: un-tensed form of the verb) *into the pool!*). From a functional perspective, however, Mood signifies a type of exchange or negotiation taking place between participants (writer/speaker and reader/hearer). The two types of exchanges identified are *proposals* (the exchange of goods and services) and *propositions* (the exchange of information) (Halliday & Matthiessen 2004). In this way, an interrogative or an imperative are understood as offers and commands, respectively, when used to exchange goods and services (proposal), and a declarative or interrogative as statements or questions, respectively, when part of an exchange of information (proposition). So rather than realisations of just declaratives, interrogatives and imperatives, we have:

- *He hates aeroplanes.* (statement, when giving information (proposition)), *Is he afraid of flying?* (question, when asking for information (proposition));
- *May I carry your suitcases?* (offer, when asking for 'goods and services' (proposal), *Take the suitcases to my room!* (command, when asking for 'goods and services' (proposal)).



- a) anticipate the attitudes and values they are expected to hold, bearing in mind that they might be multiple and diverse, and consider how this might affect their reaction to the writer's stance, and;
- b) construe the naturalised reader on the basis of the above, attending sensitively to the way in which the writer's own stance is expressed, which alternative stances are to be included or excluded, how much accommodation of these stances is required, and how the strength or certainty of evaluations are to be adjusted for optimum alignment.

Instructing the readers to take a certain stance is by no means a straightforward exercise and it depends on multiple factors such as the purpose of the text and the similarities/differences in attitudes and the power relations between the writer and reader (White 2003, Martin & White 2005). It means that a text must be read as “a set of macro-manoeuvres, by which different alignments or affiliations are envisaged with an array of different value positions” (White 2003: 275). Taking this view increases the workload of any framework seeking to uncover the many facets of the interpersonal in language. The strategies used to achieve reader alignment are one of the primary concerns of APPRAISAL Analysis (see section 2.3.4). The limitations of analysing interpersonal meanings only in terms of the lexico-grammar, Mood and Modality were part of the motivation that led to the development of the APPRAISAL System: extending it would require moving the scope of analysis ‘beyond the clause’ and beyond the lexico-grammar into the discourse semantics, and accommodating interpersonal resources such as expressing attitudes, evaluations, affect, the presence of a subjective authorial voice, and how it seeks to engage with and align readers/hearers (Martin & Rose 2003/7, Martin & White 2005). The dialogism that projects a naturalised reader is a vital concept when it comes to implied interpersonal meanings (such as evoked Attitude, see section 2.3.2.4), which are often the result of structures of meaning propagated by systems. Structures of meanings are the subject matter of the following section.

#### **2.2.4.2 A Topological (Structured) Perspective: Prosody and Semantic Grooves**

The notion of prosody has been adopted by SFL from work in phonetics and phonology (Firth 1964), and it is where there are “non-discrete realisations [of interpersonal meaning] which smear across rather than mapping on to elements of schematic structure” (Martin 1992: 553). Prosodies are also seen as ‘colouring’, ‘flowing’ or “resonating” (Thomson 1998) across clauses and longer texts. It allows for a more dynamic perspective of the texts, where meanings accumulate and spread with the progression of the text, rather than occur in isolation from one another. It prevents the system categories from becoming too restrictive and detached from both the context and the co-

text (the surrounding text) and it allows for flexibility in the meanings construed by choices, or at least “fuzzy boundedness” (Macken-Horarik 2003b: 313) between categories. This is important if we are trying to capture language in use and how it changes over time within an individual (ontogenesis), dynamically within texts (logogenesis) and within the cultural context (phylogenesis) (Halliday & Matthiessen 2004, Martin 1997).

The notion of prosody is useful for APPRAISAL and for this research, as it helps to capture interpersonal meanings that are not directly realised. White (1997, 2006) shows that in ‘hard news’ reporting which aims to present itself as being ‘objective’ and concerned only with ‘facts’, the ideational choices alone encode the attitudes of the writer, and assumptions concerning the expected attitudes of the readers. Prosody also allows for multiple-codings of APPRAISAL types, showing that attitudes need not always fit into a single category (Macken-Horarik 2003b, Martin & White 2005) (see section 2.3.2.4). Graded meanings, and the subjective presence of an authorial voice can also ‘propagate’ interpersonal meanings either prospectively or retrospectively (Lemke 1998, Hood 2004, 2006). Coffin & O’Halloran (2005, 2006) use the term ‘global semantic groove’ to refer to the contours of prosodic meanings that contribute towards naturalising a reading position and aligning readers i.e. “to capture the way in which interpersonal meaning through a text can dynamically channel readers to take up an overall evaluative stance towards the content of the subsequent text” (Coffin & O’Halloran 2005: 144). In their analyses of political discourse in newspaper texts, they show that the evaluations used instigate the presence of implicit evaluative meanings in those parts of the text which appear to be attitudinally neutral. This is referred to as ‘dog-whistle politics’ where “political communication seemingly uses neutral meanings but where in fact a negative message is likely to be ‘heard’ by the target audience” (Coffin & O’Halloran 2006: 77). It is a strategic form of communication because it avoids implications (such as being sued for negative press) and relies on close alignment of readers in order for it to be successful. APPRAISAL Analysis is well suited to tracing this kind of evaluation precisely because it accommodates the presence of structural variation in system choices.

### **2.3 APPRAISAL Analysis**

As I have mentioned briefly in previous sections, APPRAISAL Analysis (Martin 2000, Martin & Rose 2003/7, Martin & White 2005) was designed in order to provide a richer and more wide-ranging account of interpersonal meanings in language than that provided by the traditional SFG model, and which included affect (expressing emotions), evaluative meanings and strategies for engaging dialogically with readers or hearers of texts and persuading them to take a particular

stance. Its development and use for a wide variety of discourses can be seen in research on: primary and secondary school literacies (Rothery & Stenglin 1997, 2000, Macken-Horarik 2003a/b, 2006) and narrative genres (Martin & Plum 1997), history (Coffin 1997, Martin & Wodak 2003, Martin 1995), conversation analysis (Eggins & Slade 1997, Precht 2003), media discourse (Iedema, Feez & White 1994, White 1997, 2003, Achugar 2004, Coffin & O'Halloran 2005, 2006, McCabe & Heilman 2007), nationalistic discourse (Martin 2002, De Souza 2006), HIV/AIDS (Adendorff & De Klerk 2004), and academic discourse (Hood 2004, 2006). It is also useful as an analytical tool in Critical Discourse Analysis (Coffin & O'Halloran 2005).

APPRAISAL represents a shift from the level of the lexico-grammar to the level of discourse semantics. The notion of prosodies spreading across system boundaries (see section 2.2.4.2 above) provides one justification for this shift. Meanings are not confined to discrete grammatical units within the clause but resonate beyond clauses and spread across them. Another important justification is that there is not always congruence between the grammar and the semantics i.e. an analysis of lexico-grammatical realisation may not afford the meaning it construes at the level of discourse semantics (Martin & White 2005). This tension between the two levels is what Halliday terms 'grammatical metaphor' (see Halliday & Matthiessen 2004): conversion in the grammatical realisation of a meaning. For example, nominalisation involves converting a verb, adverb, or adjective into a noun (*to motivate* (verb) → *motivator*; *excellent* (adjective) → *excellence* etc). In APPRAISAL, the focus is on the evaluations expressed, and so these need to be prioritised over their grammatical realisations, which may vary significantly (see section 2.3.2.1 on Affect, for examples).

The remainder of this section (2.3) is devoted to a detailed discussion of the APPRAISAL Framework (taken from Martin & White 2005) used in this research. The focus is on system realisations and how they are affected by the co-text. The context of the research which informs the system choices (thus integrating more structured meanings) is addressed in section 2.4, together with an additional kind of interpersonal meaning, politeness, which I will incorporate into the APPRAISAL Analysis.

### **2.3.1 The APPRAISAL Framework**

The APPRAISAL Framework is designed to reveal the workings of both evaluation (feelings and attitudes expressed) and instruction (reader positioning and alignment) in texts. It is divided into three systems: Attitude, Graduation and Engagement (sections 2.3.2, 2.3.3 and 2.3.4 respectively). As something of a parallel with the multi-dimensional perspective on language provided by

Halliday’s SFL model, APPRAISAL systems are independently variable (making it possible to analyse texts only in terms of Attitude, for example, or only in terms of Graduation) but they are nearly always realised in conjunction with one another, making the most detailed and thorough analysis of interpersonal meanings one which utilises all three systems. For example: *I think* (Engagement) *it is very* (Graduation) *interesting* (Attitude) realises all three systems simultaneously. This level of specificity is a requirement for this research where I am seeking to explore both the different types of evaluative language used and how they position readers to take a certain stance.

A full representation of the APPRAISAL Framework can be found in Figure 2.2 (below). In the sections that follow, I discuss each system in turn: Attitude, Graduation and Engagement. Their various subsystems and the APPRAISAL values they realise in texts (based on Martin & White 2005) will be provided together with hypothetical examples and authentic examples from my own data. For each system, I conclude with a section on variations in the ways in which they may be realised in texts and combine with the other systems, based on work in polyphonic APPRAISAL by Bednarek (n.d.) and amendments I have made in the course of my own analysis. Building a relationship of solidarity and alignment with readers is the recurring theme throughout this section, as this is, ultimately, the aim of the reviewer reports, and the expression of attitudinal language in general.

**Figure 2.2 The APPRAISAL Framework: Attitude, Graduation and Engagement.**

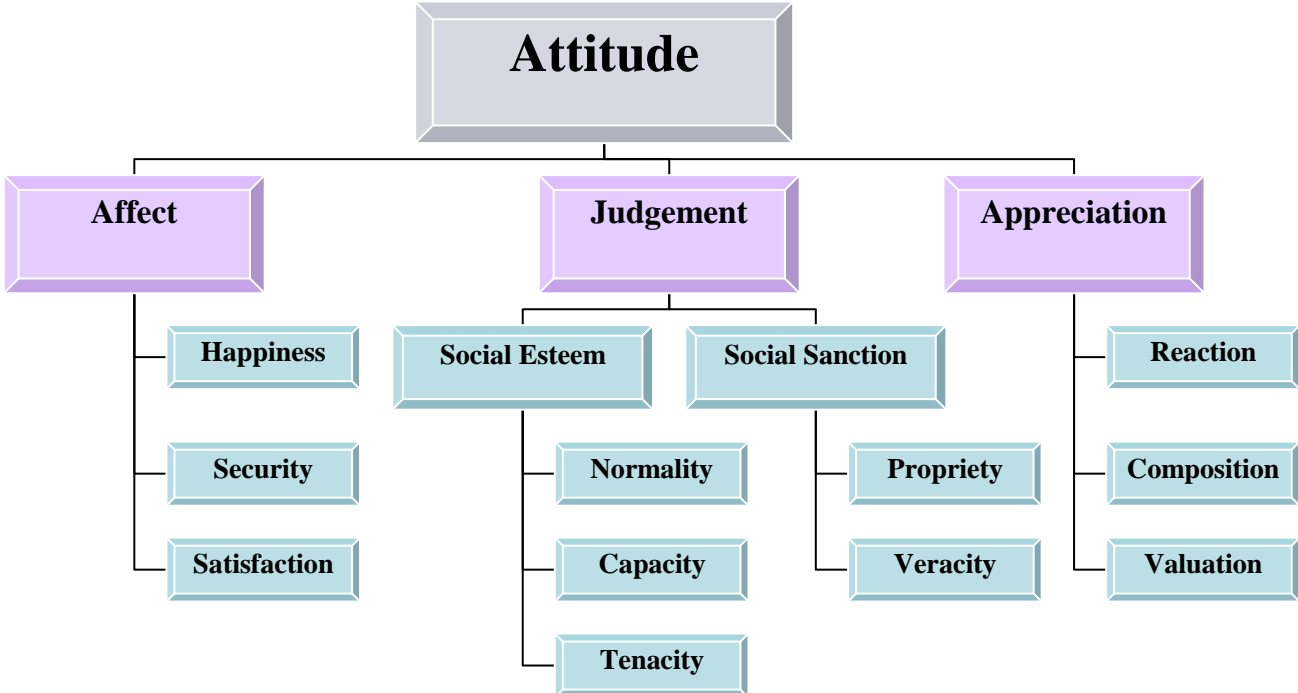


Figure 2.2 (continued from previous page)

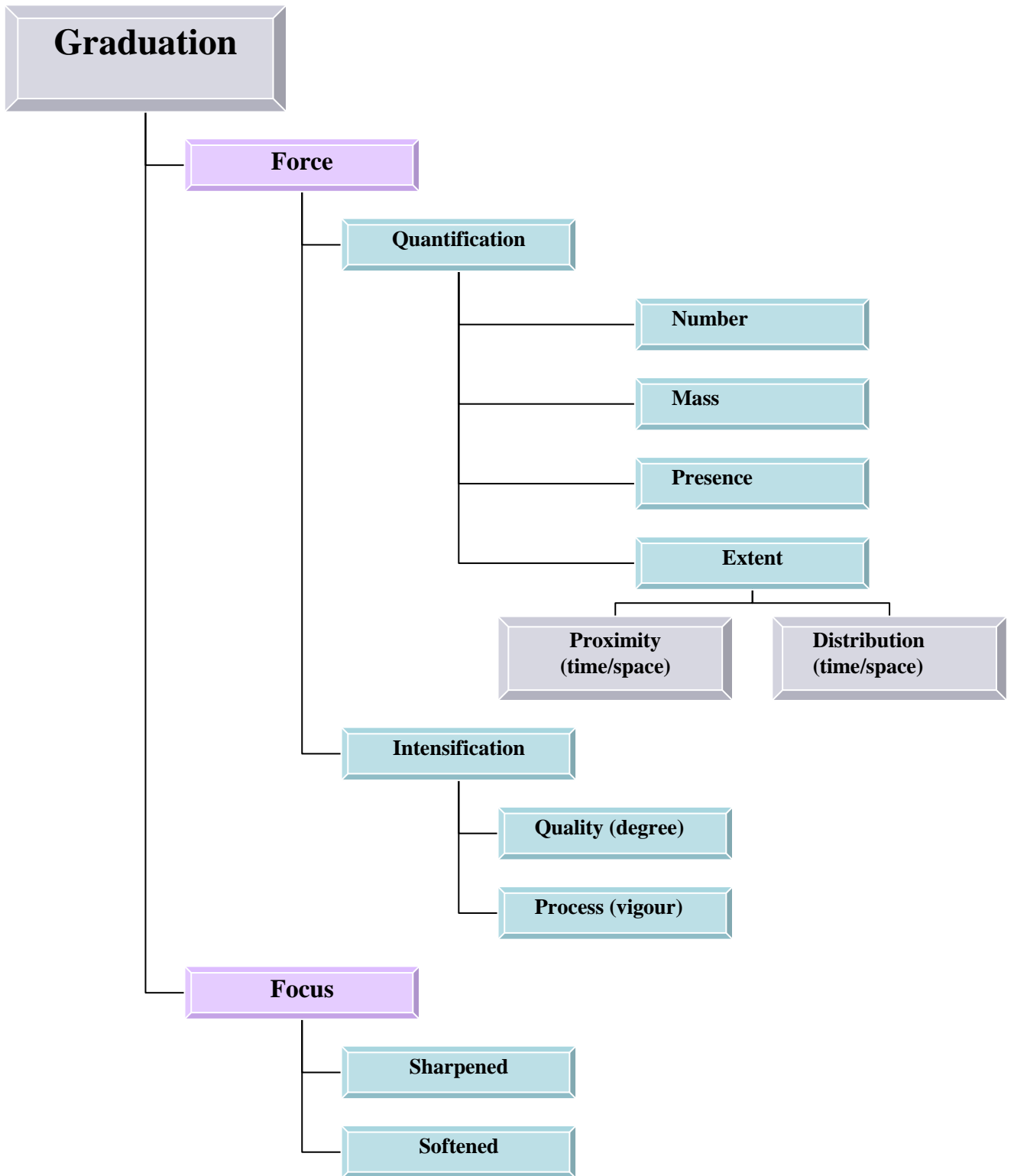
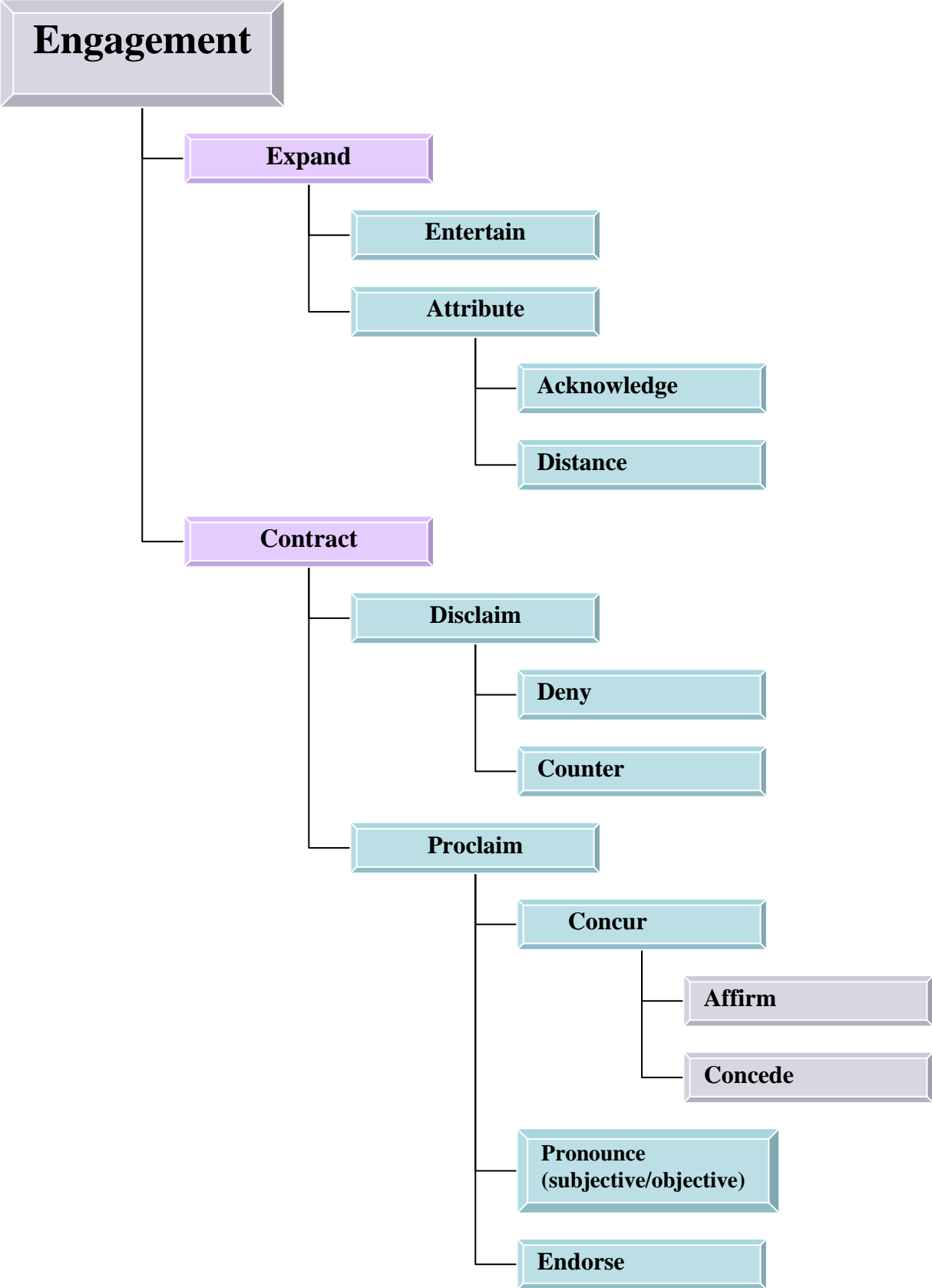


Figure 2.2 (continued from previous page)



### 2.3.2 Attitude

Attitude constitutes the foundation of the APPRAISAL system: it is designed to categorise the different ways in which attitudes and feelings are expressed, with **Affect** concerning emotions, **Judgement** the evaluation of behaviour, and **Appreciation**, the evaluation of ‘things’ (Martin & White 2005). Table 2.1 provides the different categories of Attitude as described by Martin (2000), Martin & Rose (2003/7) and Martin & White (2005). There have been some modifications made to the framework (for extensions of Graduation, see Hood 2004, Hood & Martin 2007, Hood & Forey 2008) but for this research I have followed the basic canonical framework and incorporated my own modifications. How the different Attitude types are realised in texts is discussed in detail in sections 2.3.2.1- 2.3.2.3. The combination of Attitude values in texts, with reference to the peer reviewer reports analysed for this research is discussed in section 2.3.2.4, together with some suggestions concerning the effects of Attitude for reader alignment and the ‘instructive’ aspect of APPRAISAL. All types of Attitude can be upgraded or downgraded i.e. made more or less intense or precise (Martin & White 2005). This is evident in some of the examples of Attitude in the following sections, but is the domain of Graduation and will be discussed in section 2.3.2.3. Attitude can also be made more or less ‘objective’ or ‘factual’, and this is achieved through strategies of both Graduation and Engagement (see sections 2.3.3.3 and 2.3.4.3). Attitude can be expressed in a variety of ways: *inscribed* Attitude (explicitly evaluative lexis), *evoked* Attitude (where evaluation is a consequence of ideational choices and evaluative prosody from the co-text), and *invoked* Attitude (where inscribed Attitude prompts another type of Attitude, often requiring multiple-coding of expressions) (Bednarek n.d., Martin 2004a, Martin & White 2003, Hood & Martin 2007). In sections 2.3.2.1- 2.3.2.3, the focus is on inscribed Attitude as this provides the guidelines for categorisation and the basis for categorising the less direct forms of Attitude. A discussion of evoked and invoked Attitude, together with other kinds of polyphonic APPRAISAL can be found in section 2.3.2.4.

**Table 2.1 Attitude: Strategies for the Expression of Feelings and Evaluations**

ATTITUDE			
AFFECT	JUDGEMENT		APPRECIATION
	Social Esteem	Social Sanction	
a) Happiness b) Security c) Satisfaction	a) Normality b) Capacity c) Tenacity	a) Veracity b) Propriety	a) Reaction b) Composition c) Valuation

### 2.3.2.1 Affect

Affect concerns the expression of emotions, divided broadly into three categories: **Happiness**, **Security** and **Satisfaction**, which can have either a positive or negative orientation (Martin 1997, 2000, Martin & Rose 2003/7, Martin & White 2005). A range of grammatical resources can be used to inscribe Affect, the most obvious of which is the epithet, but also processes, attributes, circumstances, modal adjuncts, nominalisations, etc. Below are some examples, based on Martin (2000) and Martin & White (2005):

- **Happiness:** *an excited boy* (epithet, positive orientation), *he was delighted* (attribute, positive evaluation), *he cried endlessly* (process, negative orientation), *he left miserably* (circumstance, negative orientation), *happily, he went on his way* (modal adjunct, positive orientation), *pleasure* (nominalisation, positive orientation);
- **Security:** *an anxious boy* (epithet, negative orientation), *he was comfortable with his decision* (attribute, positive orientation), *he reassured them* (process, positive orientation), *he moved uneasily...* (circumstance, negative orientation), *shockingly, the perpetrator was not arrested* (modal adjunct, negative orientation); *fear* (nominalisation, negative orientation);
- **Satisfaction:** *an interested pupil* (epithet, positive orientation), *she was chuffed* (attribute, positive orientation), *he exasperated her* (process, negative orientation), *she watched attentively* (circumstance, positive orientation), *cautiously, she approached the scene* (modal adjunct, negative orientation), *contentment* (nominalisation, positive orientation).

What triggers one emotion rather than another and how that emotion is manifested or expressed is, to a certain extent, culturally specific (Martin 2000) and so the interpretation of Affect must necessarily pay special attention to the social context as well as the linguistic co-text in which it occurs, for example:

- *He made a run for the door*

could be an instance of positive or negative Affect, depending on whether the individual is running away from something (making it more likely to be negative Affect) or running towards something (more likely to be positive Affect). One would need to know more about the context of this example in order to know what kind of emotion it concerns and what kind of Affect it evokes.

Affect can be investigated in further detail, for example, in terms of whether the emotions are in response to a present or future stimulus (*irrealis* vs. *realis* Affect), for example (examples from Martin 2000: 150):

- *Tremble, fearful, miss, yearn for* (*irrealis* Affect, concerning responses to future stimuli);
- *Cry, laugh, trust, assured, angry, uneasy* (*realis* Affect, concerning responses to present stimuli),

or whether the emotions are sudden or chronic, general or directed, etc., for example (examples from Martin 2000: 149):

- *The boy laughed (sudden), the boy felt happy (chronic);*
- *The boy was happy (general), the boy liked the teacher (directed).*

However, because Affect is relevant for an understanding of Attitude in general rather than its applicability to the data used in this research (see below), I shall confine my discussion to the basic three categories mentioned above.

Affect constitutes the basis of all Attitude (Martin 2000): it is the first to be acquired in individual language development, with documented physical origins (for a discussion of the development of affective semiosis from a neuroscience perspective, see Downes 2000). Painter (2003), in her functional analysis of child language development, characterises even a child's earliest utterances as affective. This shows not only that we have an innate inclination towards the expression of feelings, but more importantly, that we do so in a manner that is directed, and goal-orientated. For example, a child may express 'insecurity' (by crying or basic utterances) in order to attract attention from the caregiver who has been identified as having the ability to relieve these negative feelings. Thus, Affect can be regarded as an interpersonal expression rather than just a personal one, underscoring its relevance for an interpersonally based framework of analysis. Painter's (2003: 186) view is that "the impetus to share Affect can be put forward as the ontogenetic basis of symbolising, and so of language itself" which in turn underscores the importance of the interpersonal metafunction in language: it provides the stimulus for language use itself, as well as the language choices (ideational, interpersonal and textual) that we make.

Having said this, one would not expect Affect to be expressed much, if at all in a genre such as the peer reviewer reports analysed in this research (this is confirmed in my research findings: see Appendix 1, Table 6.3, page 170). Although the peer reviewer reports are far more personal than, say, published research articles, they still fall within the genre of academic discourse, being written by researchers, for other researchers, with a focus and a purpose strictly within the domain of institutional activity. Academic discourse is characterised by rigorously defined conventions, one of which is the use of apparently objective and depersonalised language (see section 2.4). The expression of something as personal as Affect would therefore be discouraged. So why then is there such an emphasis on the importance of Affect in language? In academic discourse (and other genres that aim to be 'impartial'), the concern is not really with the expression of feelings but *how* they are expressed. Rather than being affective, they are instead evaluative and attitudinal (Hyland 1998, Hood 2004). Academic texts are designed to persuade, to align and to provoke interest. If whenever we use language we present a stance and encode an evaluation, then we are, in effect, sharing

feelings. Just as emotion implies evaluation (if I am pleased about a situation, then clearly I have evaluated it as ‘good’), evaluation in turn implies emotion (if the situation is a good one, then I would, rationally, be pleased by it). Affect is therefore strongly implicated in all categories of Attitude (Judgement and Appreciation included) and indeed all interpersonal meaning, even if it is not explicitly characterised or expressed as such (Martin 2000) (see also ‘borderline phenomena’, section 2.3.2.4). For this reason, Judgement and Appreciation are referred to as “institutionalised Affect” (Martin & White 2005:45), with Judgement addressing how feelings are used to regulate social behaviour (in terms of ‘ethics’ and ‘morality’) and Appreciation addressing how they are used to regulate what is socially prized or otherwise (in terms of ‘aesthetics’ and ‘values’) (Martin 2000, Martin & White 2005). Judgement and Appreciation are therefore socially conditioned in a way that Affect is not (Martin 2000, Painter 2003). Both play a significant role in peer evaluation as demonstrated by the data for this research, and in general academic discourse due to its ‘institutionalised’ nature (Hood 2004), and are discussed in the following sections.

### **2.3.2.2 Judgement**

Judgement is the domain of attitudes concerning human behaviour: “personal judgements of admiration and criticism, and moral judgements of praise and condemnation” (Martin & Rose 2003: 28). Judgement therefore encompasses two dimensions: **Social Esteem**, which addresses the ‘personal’ dimension, and **Social Sanction**, which addresses the ‘moral’ dimension (Martin & White 2005). Social Esteem concerns judgements of **Normality** (to do with usualness), **Capacity** (to do with capability) and **Tenacity** (to do with reliability and resolve). Social Sanction concerns **Veracity** (to do with truthfulness) and **Propriety** (to do with ethics) (Martin & White 2005). A useful way to distinguish between Social Esteem and Social Sanction is to consider them in the light of how they may be corrected if they occur with too negative an orientation: excess negative Social Esteem might require intervention from a therapist whereas excess negative Social Sanction might require intervention from a lawyer (example from Martin 1997, Martin & White 2005). Below are some examples of Social Esteem and Social Sanction in the form of epithets (from Martin 1997, Martin 2000, Martin & White 2005). It is important that they are treated as guidelines rather than a ‘Judgement recipe’, as the specific attitudes that different evaluations convey are dependent on the co-text and the social context i.e. the Field in which they occur (bearing in mind that what is socially valued varies according to culture) (Martin & White 2005). Like Affect, they can also be intensified and graded, or encode writer stance (see sections 2.3.2.4 and 2.3.3).

**Social Esteem:**

- **Normality:** *special, fortunate, celebrated, fashionable* (positive orientation); *obscure, unlucky, odd, eccentric*, (negative orientation);
- **Capacity:** *skilled, clever, capable, competent* (positive orientation), *weak, ignorant, stupid, inexpert* (negative orientation);
- **Tenacity:** *dependable, patient, persevering, thorough* (positive orientation), *unreliable, hasty, reckless, distracted* (negative orientation);

**Social Sanction:**

- **Veracity:** *honest, truthful, genuine, credible* (positive orientation), *deceitful, fake, manipulative, lying* (negative orientation);
- **Propriety:** *ethical, fair, just, kind* (positive orientation), *corrupt, evil, greedy, arrogant* (negative orientation).

Judgement in texts is also often expressed in less congruent ways. The peer reviewer reports which require an assessment for which Judgement plays a significant role, need a variety of ways to express Judgement that are finely attuned to the requirements of the report as well as to what is valued within the scientific community, as the following examples show (underlining indicates Attitude - see section 3.4.1.1 for formatting conventions):

**Social Esteem:**

- *This is an important step which is not done in many working groups* (positive Normality) (15; 83-84);
- *The only other marine ecologist who moves with such ease is...*(positive Capacity) (100; 219-220);
- *Prof\*\*\* is engaged, and has been engaged in a great many projects* (positive Tenacity) (12; 125).

**Social Sanction:**

- *Dr\*\*\*'s claims of work done in collaboration with...[when] there was no collaboration* (negative Veracity) (3; 334-335);
- *The significance in the broader context is that this research is supporting society...*(positive Propriety) (15; 203).

Clearly, as can be seen from these few examples, values of the scientific community include: unique research (positive Normality), skill (positive Capacity), productivity and industriousness (positive Tenacity), truthfulness (positive Veracity) and research that contributes to the well-being of society (positive Propriety). 'Correct' interpretation of the Judgements made depends on congruence between the naturalised reader projected by the text and the actual readers i.e. the readers must belong to the same 'discourse community' (see section 2.4.2), be familiar with the values and assumptions underlying the evaluations, and endorse them. It must be acknowledged that Judgement can be even less explicit in its expression than the examples above. It is often invoked through a positive assessment of a researcher's work (e.g. an assessment of the work as poor could imply an incompetent researcher), or double-coded with another type of Judgement (see section 2.3.2.4). This brings us to the third type of Attitude under APPRAISAL: Appreciation.

**2.3.2.3 Appreciation**

Appreciation is about attitudes towards entities or things and their social worth, and is organised into three sub-systems: **Reaction** (how emotionally captivating something is), **Composition** (how coherent and logical it is) and **Valuation** (how useful or worthy it is considered to be) (Martin 1997, 2000, Martin & Rose 2003/7, Martin & White 2005). An additional category, *Social Valuation* is proposed by Coffin & O'Halloran (2006: 83), but I consider the social dimension of Appreciation to be implicit in it and therefore not requiring a separate category. Appreciation can also be intensified, quantified, or made more or less precise (see section 2.3.3 on Graduation). Examples of the different types of Appreciation (from Martin & White 2005) include:

- **Reaction:** *interesting, exciting, remarkable, captivating* (positive orientation), *boring, monotonous, off-putting, dull, tedious* (negative orientation);
- **Composition:** *logical, synthesised, proportioned, clear, elegant* (positive orientation), *disorganised, unclear, simplistic, distorted, irregular* (negative orientation);
- **Valuation:** *good, profound, landmark, worthwhile, superior* (positive orientation), *insignificant, worthless, useless, poor quality, ineffective* (negative orientation).

Appreciation, together with Judgement, is the most frequently found evaluation type in academic discourse (Hood 2004, 2006), and it most certainly dominates in the peer reviewer reports (see Appendix 1, Table 6.3, page 170), as one would expect, considering that they specifically require the assessment of the quality of the researcher's work (Valuation and Composition), and what reviewers think of it (more appropriately expressed as Reaction rather than Affect). Appreciation can be linguistically sourced in a variety of ways, in addition to the epithets mentioned above, as the following examples from the peer reviewer reports show:

**Reaction:** *It's one of the four "hot" stories on today's website* (positive Reaction) (16; 123);

**Composition:** *The applicant has been able to...put them into a firm ecological and evolutionary framework* (positive Composition) (101; 318-319);

**Valuation:** *[her work would be] very competitive anywhere in the world* (positive Valuation) (4; 89), *she does not belong to the international top researchers* (negative Valuation) (7; 85-86).

The examples above also show how dependent Appreciation values are on both the co-text and the social context i.e. the prosodic Attitude already in motion, and the social norms determining what is considered of worth and receives a positive evaluation, and vice versa. As mentioned previously, Affect is implicated in other types of Attitude, and so too are Judgement and Appreciation, considering that, for example, someone who produces work that is evaluated positively in terms of Reaction, Composition and Valuation, must have certain behavioural qualities that can be evaluated positively in terms of Judgement (see 'border phenomena' and 'APPRAISAL blends' in the following section). Although the APPRAISAL Framework organises Attitude typologically i.e. into a finite set

of discrete categories, the way it functions in texts, particularly in combination with Graduation and Engagement must also be interpreted from a topological perspective. The categorisation of Attitude often depends on prosodies in the co-text and contextual factors unapparent in discrete linguistic formulations (Bednarek n.d.). The following section addresses some of the complexities of Attitude in texts in terms of intra-Attitude groupings.

#### **2.3.2.4 Attitude in Texts: Polyphonic Variations and Reader Alignment**

As I mentioned in section 2.3.2, Attitude can be inscribed, evoked or invoked. *Inscribed* Attitude, which is realised through the use of Attitudinal lexis (Martin & White 2005) is the most common type found in the peer reviewer reports (see Appendix 1, Table 6.4, page 170) and can be seen in the examples from the literature and the data for this research in the preceding sections on Affect, Judgement and Appreciation. Implied or indirect Attitude is most clearly recognisable in the many instances of double- or triple-coding found in my analysis of the reports. The idea of multiple-coding of Attitudinal expressions has been put forward by a number of researchers (e.g. Adendorff & de Klerk 2004, Bednarek n.d., Macken-Horarik 2003b, Martin 2004a, Martin & White 2005, Page 2003, Rothery & Stenglin 2000) and involves, essentially, the combination of inscribed and invoked realisations of Attitude i.e. the explicit lexicalisation of one type of Attitude concurrently realising another type of Attitude, which is not explicitly lexicalised. The latter is referred to as *invoked* Attitude (Bednarek n.d.). *Evoked* Attitude is even more indirect than invoked Attitude as it operates in the absence of Attitudinal lexis. It is where interpersonal meanings are the result of specific ideational choices (Martin 2000, Hood & Martin 2007) and the positioning of this language within the text (see Coffin & O'Halloran 2005, 2006, and section 2.2.4.2 above on prosody and the 'semantic groove'). Evoking Attitude depends entirely on structured meanings, and it involves "[choosing] non-evaluative meaning with respect to the evaluation it has the potential to evoke" (Hood & Martin 2007:744), thus requiring careful attention to the naturalised reading position and successful reader alignment. Evoked Attitude can be realised in a number of ways: it can be *provoked* through the use of metaphor, or *invited* (either *flagged* or *afforded*), where the ideational choice of language invites an evaluative interpretation by the reader (see Hood & Martin 2007, Bednarek n.d.). In my analysis however, I do not subdivide evoked Attitude into these more specific categories, mainly because in the peer reviewer reports analysed, the majority of evaluations are either inscribed or invoked (see Appendix 1, Table 6.4, page 170), and these represent the main purpose of the reports, which is the expression of attitudes. Below are some examples of inscribed, invoked and evoked Attitude from the peer reviewer reports (pale font indicates Graduation and shading, Engagement - see section 3.4.1.1 for formatting conventions):

**Inscribed Attitude:** *The applicant is an able thinker (positive Capacity) and very active (positive Tenacity) in the research/conservation community (22; 129-130);*

**Invoked Attitude:** *[this] is quite a feat for someone 3 years out from a PhD (double-coding: inscribed positive Capacity and invoked positive Normality) (4; 69);*

*She would stand a very good chance to fill the chair of a Junior or Assistant professor at a University in Europe or North America (triple-coding: inscribed positive Valuation, invoked positive Capacity and Reaction) (7; 339-341).*

In the first example of invoked Attitude, the impressive ‘feat’ that has been accomplished (positive Capacity) suggests that it is not a common occurrence, thus making the applicant somewhat unusual (positive Normality). In the second example, to say that the applicant is ‘good’ (positive Valuation) implies that she is also capable (positive Capacity) of capturing international attention (positive Reaction).

**Evoked Attitude:** *The applicant is personally known to the reviewer for many years and from several conferences where she presented her scientific work (evoked positive Capacity of the reviewer) (8; 4-5).*

There is nothing explicitly Attitudinal about the above example, but it is categorised as positive Capacity because, in the context of the rating system, acquaintance with the applicant and familiarity with his/her work is one of the prerequisites for being a reviewer, and the better a reviewer knows the applicant, the more authority his/her assessment is likely to carry (this is discussed in more detail in section 4.3.2.1). Notice also the instances of Graduation (indicated by pale font): *many* and *several*. Graduation has an important role in evoking Attitude as it adds an element of subjectivity to a proposition, thus making it more like an individual evaluation than an objective fact (see Hood 2006, Hood & Martin 2007, and section 2.3.3.3).

How invoked and evoked evaluations are categorised under Attitude is to some extent dependent on the reader or analyst’s interpretation of the Attitudinal values indirect evaluations seem to imply. As previously mentioned, the interpretation of indirect Attitude relies on a readership already ‘tuned in’ to the writer’s attitudes and stance and congruent with the naturalised or imagined readers to whom the text is directed. For an analyst such as myself, not necessarily included amongst the naturalised readers (in the case of the peer reviewer reports, for example), it is through familiarity with the context in which the texts are produced, their purpose, and the linguistic and social constraints under which they are produced, that access the naturalised reading position, and hence the indirect evaluations is attained.

‘Borderline phenomena’ (Martin & Rose 2003/7, Martin & White 2005, Bednarek n.d.) are Attitudinal values that seem to fit under more than one category. For example, Martin & White (2005) and Bednarek (n.d.) note the resemblance between Affect, which relates to emotion, and

Reaction, which concerns the emotional response to an entity in terms of how pleasing or interesting it is. For example, *I am interested* would be classified as positive Satisfaction, but *the book is interesting* is positive Reaction. The difference can be discerned in the ‘framing’ of the evaluation. In the first instance, the ‘experiencer’ is foregrounded, thus construing the evaluation as an explicitly emotional response. In the second, however, *interesting* is construed as quality of the book, with no explicit reference to anyone who might be experiencing any feelings. Bednarek (n.d) provides some arguments for classifying some such examples as covert Affect rather than Reaction. I will not go into this particular point in any further detail, however. Due to the very institutional nature of the peer reviewer reports, within a discourse which does not prioritise the expression of Affect, I have chosen to categorise borderline cases such as this as Reaction rather than Affect. Another borderline worth mentioning can be seen in the similarities between Judgement and Appreciation (Martin & Rose 2003/7) where appreciations of human-made entities can also suggest judgements of the person and vice versa, for example:

- *I view these discrepancies in a serious light* (negative Reaction and negative Veracity). *They throw into doubt the truthfulness of other claims* (negative Valuation and negative Veracity) (3; 345-346)

In this example, the perceived negative Veracity (i.e. dishonesty) is expressed in terms of the reviewer’s negative Reaction and negative Valuation of the application under review. Martin & White (2005: 59, see also Lemke 1998), again, provide ‘frames’ to help distinguish between Judgement and Appreciation, for example:

- I consider it [Appreciation] e.g. *I consider it interesting*
- It was [Judgement] of him to do that e.g. *It was dishonest of him to do that*

I have used frames such as these as a guide to categorisation as far as possible, but because the evaluations made in the peer reviewer reports are often dense or incongruently expressed, in many cases I have chosen to opt for double-coding (with the Attitude either inscribed or invoked) in order to avoid being too reductive and to retain the nuance and richness of the evaluations. Where, in the double-coding, both types of Attitude are inscribed, it can be referred to as an ‘APPRAISAL blend’ (Bednarek n.d.) where both values are explicit and neither carries more weight than the other, for example:

- *Prof\*\*\* and his team were able to publish a landmark paper* (double-coding: inscribed positive Capacity and Valuation) (12; 120-121)

In my tabular analyses, (Appendices 19-29) I do not indicate explicitly codings of borderline values or blends, but I mention them here and consider them in the interpretive analysis (Chapter 4) because they are important for justifying some of the double- or triple-coding used, and why I have categorised expressions as one type of Attitude rather than another. They also contribute to a justification for allowing a topological perspective together with a typological one i.e. that although

the framework appears to suggest that Attitude can be neatly slotted into categories according to a set of criteria, the prosodic and dynamic nature of evaluation means that analyst interpretation does have a place, and that some of the categories can be blurred or seen as ‘scalar’ rather than ‘discrete’ (Bednarek n.d., Martin & White 2005).

I conclude this section by considering the role of Attitude in instructing and aligning the reader. Although much of the ‘work’ in this regard is done by Engagement and Graduation, Attitude is certainly very important in the peer reviewer reports as their primary function. As Martin (2002: 196) says: “attitude is an interpersonal resource which we draw on heavily in relation to solidarity... We express feelings in order to share them... to build relationships”. Although building solidarity with the readers in the case of the rating system is more complex than this (see sections 2.4 and 4.3), it is certainly true that the evaluations of the applicant have an instructive interpersonal function and the profuse Graduation and Engagement strategies used to manage them indicates the reviewers’ awareness of this.

### 2.3.3 Graduation

The next major system under APPRAISAL, Graduation, concerns the linguistic resources used to ‘upscale’ and ‘downscale’ meanings, to make them more or less intense, or more or less precise (Martin & White 2005). It is designed mainly to investigate how Attitudinal meanings can be increased or decreased in terms of their orientation (positive or negative) or specificity (Martin & White 2005), for example: *very good* is more ‘positive’ than just *good*, and *a true virtuoso* is more precise than *something of a virtuoso*. Table 2.2 provides the different Graduation categories as described by Martin & White (2005), with one exception: I have divided ‘mass’ and ‘presence’ into separate categories where Martin & White (2005) conflate them (see section 2.3.3.1). It is organised into *Force*, which deals with grading according to amount (Quantification) and strength (Intensification), and *Focus*, which is the sharpening and softening of meanings in terms of precision (Martin & White 2005). These will be discussed in detail in sections 2.3.3.1 and 2.3.3.2. Section 2.3.3.3 explores the effect of Graduation for evaluation and reader alignment, with specific reference to the peer reviewer reports.

**Table 2.2 Graduation: Strategies for Grading Expressions of Attitude**

<b>GRADUATION</b>	
<b>FORCE</b>	<b>FOCUS</b>

Quantification	Intensification	
a) Number b) Mass c) Presence d) Extent: i. Proximity (time/space) ii. Distribution (time/space)	a) Quality (degree) b) Process (vigour)	a) Sharpened b) Softened

### 2.3.3.1 Force

Force involves the graduation of evaluations that can be intensified and those that can be quantified.

**Intensification** involves the upscaling and downscaling of qualities and processes and

**Quantification** involves measurements in terms of: number, mass, presence, and extent in time and space according to proximity and distribution (Martin & White 2005). The instantiation of Force

can occur in a variety of ways: **isolating**, where it comprises a single lexical item e.g. *very*,

**infusing**, where it is encoded into the lexical item itself e.g. *excellent* as an intensification of *good*,

or it can be expressed through **figurative** language e.g. *he is a shining star* (Martin & White 2005).

Some examples of Intensification and Quantification (based on Martin & White 2005) isolating, infusing and figurative are provided below:

#### Intensification:

- Qualities: *Very good* (upscaled, isolating), *excellent* (upscaled, infusing);
- Verbal groups: *Walk slowly* (downscaled, isolating), *amble* (downscaled, infusing);
- Comparatives and superlatives: (infusing): *better, best* (quality, upscaled) *faster, fastest* (process, upscaled);
- Figurative language: *run like the wind* (process, upscaled), *he is a shining star* (quality, upscaled) (102: 110).

#### Quantification:

- Number: *a few, some* (downscaled, isolating), *many, a lot* (upscaled, isolating), *a pinprick on the map* (downscaling, infusing/figurative) *a horde of mobsters* (upscaled, infusing/figurative);
- Mass: *little, small* (downscaled, isolating), *large, hefty* (upscaled, isolating); *his cupboard of a bedroom* (downscaled, infusing/figurative) *he's a Neanderthal* (upscaled, infusing/figurative);
- Presence: *trivial, inconsequential* (downscaled, isolating), *momentous, important* (upscaled, isolating); *bread-and-butter publications* (upscaled, infusing/figurative);
- Extent: Proximity: *archaic, old* (time, downscaled, isolating), *modern, current* (time, upscaled, isolating), *far, remote* (space, downscaled, isolating), *nearby, close* (space, upscaled, isolating); *an eternity* (time, upscaled, infusing), *halfway across the world* (non-literally) (distance, upscaled, infusing);
- Extent: Distribution: *frequently, regularly* (time, upscaled), *rarely, seldom* (time, downscaled), *broad, wide* (space upscaled), *narrow, limited* (space, downscaled), *like clockwork* (time, upscaled, infusing/figurative), *once in a blue moon* (time, downscaled, infusing, figurative), *an endless stretch of land* (space, upscaled, infusing).

I have separated ‘mass’ and ‘presence’ because, as the above examples show, they appear to grade rather different things. I have assigned to ‘mass’ concepts of size and substantiality of both physical and abstract entities. ‘Presence’ is reserved for more abstract concepts concerning significance or importance. Something can be substantial in size, yet insignificant, making upscaling in terms of ‘mass’ more appropriate than upscaling in terms of ‘presence’. This is a distinction worth making explicit for the reviewer reports where the two are considered separately in evaluations. For example, a large output (‘mass’) may not translate into a significant, ground-breaking contribution to the field (‘presence’), and vice versa. All types of Force occur in the reviewer reports, and it is used more frequently than Focus. Some examples from my data are:

**Intensification:**

- ...*outstanding contribution* (upscaled quality, infusing) (7;37);
- [He] *urged reconsideration of...*(upscaled process, infusing) (12; 77)

**Quantification:**

- *22 citations in 7 years is not very high* (downscaled number, isolating);
- *enormous advantage* (upscaled mass, infusing) (12; 35);
- *the game industry is a powerful engine of job and wealth creation* (upscaled presence, figurative) (7; 136-137);
- *Recently, we met again in New Zealand* (upscaled Proximity (time), isolating) (100; 306);
- *His extensive network of collaborators* (upscaled Distribution (space)) (100; 16);
- *...her close personal and professional ties with Dr G.* (upscaled Proximity (space), isolating ) (8; 175-176);
- *Her contributions were always clear* (upscaled Distribution (time), isolating) (8; 45).

Force is a means for the reviewers to ‘fine-tune’ their evaluations, to make them more personal and more particular, and this plays an important role in reader alignment (see section 2.3.3.3) and making evaluations more polite (see section 2.4). I turn now to the second Graduation type: Focus.

**2.3.3.2 Focus**

Focus involves “grading according to prototypicality and the preciseness by which category boundaries are drawn” (Martin & White 2005: 137), with the degree of precision being either ‘sharpened’ or ‘softened’. Focus is generally used to make more subjective (or even heteroglossic – see section 2.3.4.1) categories or concepts which, experientially, we consider fixed, such that it “operates to reconstrue these categories in such a way that they participate in scalable clines of prototypicality” (Martin & White 2005: 137). For example:

**Sharpened:** *some real novelties* (8; 40), *\*\*\* is diagnostic imaging in South Africa* (102; 109), *excellent animal physiology in its true sense* (12; 45);

**Softened:** *almost unique* (102; 341), *somewhat one-sided* (4; 124), *relatively obscure* (16; 301).

Focus does not occur as frequently in the peer reviewer reports as Force does, which one would expect, bearing in mind that the reports operate on degrees of eminence rather than extent of

conformity to a prototypical ‘scientist’ (which is generally taken for granted). Both Force and Focus, however, are effective in reader alignment and in politeness strategies used to negotiate potentially problematic evaluations.

### 2.3.3.3 Graduation in Texts: Polyphonic Variations and Interface with Attitude and Engagement

Coding expressions of Graduation involves some of the same difficulties encountered when coding Attitude: some expressions change in their value according to the co-text, some do not appear to fall in any of the categories, while others appear to fall into more than one etc. Firstly, I have not included multiple-codings of Graduation in this analysis. This is because its primary role in the peer reviewer reports is to scale Attitudinal expressions and so it is the fusion or pairing with the expression of Attitude that takes precedence over fusions within Graduation, that could result in ambiguous and unclear interpretation of the expression of Attitude under modification. For example:

- *[he publishes in] some of the best journals* (16; 162-163).

When analysed in isolation, *some* would be downscaled number, and *best* upscaled quality. However, with consideration to the co-text in which this positive Valuation appears (and even to an extent when it appears in isolation), it makes no sense to have both downscaling and upscaling. The resonating evaluations in this report are predominantly positive, and so I have coded *some of the best* as one instantiation of upscaled quality. If the evaluation had been: *[he publishes in] all of the best journals*, I would code *all* as an upscaling of number and *best* an upscaling of quality. The double Graduation here would reflect the difference in intensity between *some of the best* and *all of the best*, without the complications that might arise through double-coding. My concern here is to emphasise the importance of reading and interpreting APPRAISAL values within their co-text. Although some might argue that it introduces too much of an element of analyst subjectivity, for the APPRAISAL framework to function effectively, it must allow flexibility when it comes to coding values. Because interpersonal readings unfold dynamically and redound prosodically throughout texts, it is important that the analyst pays attention to this, rather than force-categorises decontextualised and isolated expressions.

The relationship between Graduation and Attitude is particularly pertinent when it comes to indirect Attitude (invoked or evoked). For example, the choice of an intensified expression, within an apparently ‘neutral’ expression can evoke Attitude (Martin & White 2005, see also Hood 2004, Hood & Martin 2007):

- *I see that this candidate has a large number of post graduate students (16; 266-267)*

In a context where student supervision is valued (and endorsed by the naturalised reader), the upscaling of number evokes an Attitudinal value of positive Capacity. This does not occur as frequently in the peer reviewer reports as it does in other types of academic discourse (see Hood 2004), as they are dominated by inscribed Attitude. However, it is worth mentioning as a justification for some of my categorisations of evoked Attitude. It is also an important indicator of how Graduation functions as a mechanism for aligning readers. Because Focus often operates on non-gradable concepts, it is an indication of the writer's stance towards the evaluation made (Martin & White 2005), for example: *almost unique* (softening) (102; 341) is an indication that the reviewer has not fully subscribed to the 'uniqueness' of the work evaluated, whereas *some real novelties* (sharpening) (8; 40) is an indication that the reviewer has. Force can also indicate stance in that *outstanding* or *excellent* indicate a greater degree of commitment and perceived endorsement from the readers, than, say, *quite good* which may signal some anticipated disagreement. In either of these cases, should there be incongruity between the reader response anticipated by the reviewer, and their actual response, the building of solidarity and alignment is threatened. The following section on Engagement explores in more detail the strategies by which stance is conveyed and readers aligned.

#### **2.3.4 Engagement**

The third system under APPRAISAL is Engagement, which directly addresses the dialogic nature of texts. Engagement focuses on the linguistic means by which writers 'enter into a dialogue' with their readers in order to present a stance towards a particular evaluation or attitude, and to instruct (or position) readers either to align or 'disalign' with this stance (White 2003, Martin & White 2005). The different types of Engagement, as described by White (2003) and Martin & White (2005) can be found in Table 2.3. I discuss each Engagement type in terms of its grammatical and lexical instantiations and its interpersonal effects (sections 2.3.4.2 to 2.3.4.3 to follow).

Engagement strategies are particularly important for understanding the persuasive nature of the reviewer reports. Reviewers are requested by the NRF to provide evaluations based on their personal knowledge of the applicant and his/her work so that the NRF assessment panel can allocate a rating based on these reports. The very purpose of the report is therefore to provide a stanced evaluation with the overt presence of the authorial voice. The dialogism of the reports is also overt: at times reviewers explicitly address the readers and indicate that their assessments are made with the readers and the implications of the report (i.e. the role it plays in allocating the

applicants ratings) in mind (see section 4.3). With the knowledge that the reports will have a substantial bearing on the applicant being assessed and strong influence over the outcome of the rating process, reviewers need to assert their personal stance towards the applicant, and persuade the readers to read compliantly. The Engagement systems allows for a detailed investigation of such strategies which can provide insight into what constitutes effective alignment and appropriate intervention of the authorial voice with regard to the values and norms of the scientific community (see section 2.4.3).

Engagement attends specifically to **heteroglossic** evaluations (Bakhtin 1981, White 2003, Martin & White 2005), where alignment is sought through the explicit intervention of the authorial voice into the text in order to present a subjective stance, and simultaneously acknowledge the possibility of alternative voices with alternative stances. How far these alternative stances are allowed to intrude on the one being projected can vary considerably (see sections 2.3.4.1 and 2.3.4.2 on Expansion and Contraction). The alternative to a heteroglossic evaluation is a **monoglossic** evaluation which excludes the presence of any voice (an indication of subjectivity) and construes evaluation or assertions as ‘facts’. Both heteroglossia and monoglossia project a certain naturalised readership, and both can be effective alignment mechanisms. For example: *It appears to me as though Professor X has been successful* is heteroglossic, because it emanates from an individual source (me), and it indicates a subjective perspective, thus projecting a readership of potentially diverse stances on this particular evaluation. This can work as an alignment mechanism if, for example, the source of the assertion is regarded as highly credible, but there is some doubt concerning the extent of Professor X’s success. In this case, the authorial voice serves to reassure readers of the surety of the claim, whilst acknowledging that some may disagree with it. *He has been successful*, on the other hand, is monoglossic as it excludes the presence of any source, thus projecting a compliant readership who will take the evaluation as given. This can threaten solidarity with non-compliant readers as it does not open up dialogic space for alternative positions. If this is intentional on the part of the writer, it may serve to strengthen a stance for the compliant readers and encourage their disalignment from the non-compliant ones.

Although all heteroglossic evaluations construe a ‘dialogic space’ in the text, characterised by a number of voices and diverse stances, there is variation in the presence and extent of this space, and the significance one stance is given in relation to the others. From a broader perspective, heteroglossic evaluations can function to ‘open up’ the dialogue in the text and invite alternative perspectives, for example: *Professor X’s research suggests that...* Alternatively, they can ‘close

down' the dialogue by rejecting (although not excluding) and asserting against alternative perspectives, for example: *Professor X's research proves that...* The former is referred to as dialogic **expansion** and the latter, dialogic **contraction** (White 2003, Martin & White 2005). Expansion and Contraction are also distinguishable in terms of the naturalised reading position each project. Expansion tends to projects a readership of diverse or even dissident stances that require accommodation, (even though the authorial voice may not grant them the same credibility as his/her own stance). Contraction, however, projects a readership more unanimous in its attitudes and value positions. The authorial voice therefore works on the assumption of this conformity, and attends to it when expressing its own attitudes and value positions which may or may not correspond with those of the readers.

Table 2.3 provides an outline of the different Engagement strategies as described in Martin & White (2005), with one exception: I have separated objective and subjective Pronouncement into two separate categories where in the original framework they are combined (see section 2.3.4.2). The remainder of this section is devoted to a description of the various grammatical frames and lexical categories that characterise these choices, and a discussion of their effects in written texts, with reference to the peer reviewer reports I analyse.

**Table 2.3 Engagement: Strategies for Dialogic Expansion and Contraction**

<b>Expansion</b>	<b>Contraction</b>
1. Entertainment	1. Disclaimers
2. Attribution a) Acknowledgement b) Distance	a) Denial b) Counter
	2. Proclaimers a) Concurrence      i. Affirmation ii. Concession b) Pronouncement    i. objective ii. subjective c) Endorsement

### 2.3.4.1 Expansion

Expansion “actively makes space for alternative positions and voices” (Martin & White 2005: 102) by either *entertaining* an evaluation, or *attributing* it to a named or unnamed source external to the text. In both cases, an evaluation becomes heteroglossic as it is construed within a context of alternatives: alternative stances, voices and anticipated reactions from the readers (Martin & White 2005).

**Entertainment** construes an evaluation or stance as being subjective, and only one of a possible range of options. The degree of commitment encoded towards a personal stance may be linguistically sourced and adjusted through the use of ‘modality’, for example: modal auxiliaries (*could, might, must, should*), modal adjuncts (*possibly, probably, certainly*), modal attributes (*It is possible/probable/certain that...*), circumstances (*In my opinion...*) mental/verbal projections (*I believe, I suspect, I doubt*) and/or ‘evidentiality’, for example: *therefore, it seems that..., this appears to suggest that...* (White 2003, Martin & White 2005). Whereas traditional accounts of modality and evidentiality interpreted their use in terms of varying degrees of certainty (see section 2.2.4), a dialogic approach suggests that it is more often an interpersonal resource for negotiating a potentially problematic point of view i.e. a matter of individual subjectivity rather than degree of reliability. For example, in the peer reviewer reports (and academic discourse in general), Entertainment is used to ‘hedge’ claims and make them appear tentative, as a deference politeness strategy (see sections 2.4.3 and 2.4.4) in order to put forward a stance or claim, without imposing it upon the readers, thus building solidarity with them (Hyland 1994, 1996, 1998a/b, White 2003), for example:

- *I think it would be fair to say* (subjective Pronouncement/Entertainment (deference politeness)) *that he is the person the international imaging community would turn to seek advice or comment as a result of his published work in this area* (double-coding: positive Reaction and Valuation) (102; 365-367).

As a gesture of deference to the community or researchers in this field and the NRF assessment panel (some of whom are also members of this community), the reviewer avoids compromising his/her credibility by making a monoglossic claim which may not be accepted by all the readers. In the peer reviewer reports Entertainment is also frequently used to downplay the negative effects of criticisms,

- *The only weak point* (negative Valuation) *may be* (Entertainment (deference politeness)) *the lack of innovation in the approaches used* (double-coding: negative Normality and Valuation) (3; 25-26).

Scientific research, being a co-operative process, requires strong working relationships and an ethos which facilitates the production of new knowledge (Swales 1990, Hyland 1998). It is therefore out of respect to this culture, that criticisms are formulated as subjective points of view (even if they are not meant as such) (see sections under 2.4 for a discussion of politeness in the reports).

**Attribution** involves the presence of an external voice which ‘takes over’ the responsibility for an evaluation or claim from the authorial voice, and it can be introduced either by an *Acknowledgement* or a *Distancing* strategy (White 2003, Martin & White 2005). The linguistic resources for Attribution are therefore most commonly mental or verbal processes. **Acknowledgement** is a ‘neutral’ way of introducing an external voice which obscures the authorial voice’s stance concerning the propositions that are made. It typically involves ‘reporting verbs’ such as: *report, state, say, announce, inform, describe, declare*, etc. (White 2003, Martin & White 2005). **Distancing** involves introducing an external voice in such a way that the authorial voice ‘washes its hands’ of the proposition it makes and explicitly distances itself from it. This is achieved through the use of verbs such as *claims, maintains, purports* and the use of scare quotes (Martin & White 2005). Although the verbal processes used to Attribute evaluations (particularly for Acknowledgement) seem to indicate a ‘lack of stance’ on the part of the writer, it is important that they are interpreted in light of the surrounding co-text and the argument or point of view that the text as a whole functions to put forth. External voices are nearly always included strategically in order to substantiate an argument or to align or disalign readers with the external voice’s claims (Martin & White 2005). Attribution does not play a major role in the peer reviewer reports which require personal assessments by individuals whose credibility has been pre-established (in the first section of the reports) and therefore does not necessarily require the citation of external voices. However, it is not uncommon for reviewers to include the applicants themselves as external voices, in order to comment on the self-assessments they made when applying for the rating, for example:

- *I find the evaluation of Dr\*\*\* most problematic. She states the dilemma quite clearly herself* (Acknowledgement (deference politeness)): “*Thus far Prof G (supervisor) has been the major intellectual driving force* (8; 172-173).

While *states* may not encode stance, the reviewer clearly uses a variety of means to indicate his/her own opinion of the applicant’s self-evaluation. In this example, by drawing on the voice of the applicant and presenting it as ‘neutral’ (and thus free of the reviewer’s evaluation), the reviewer is justifying the criticism made and displaying deference by constructing it as emanating from the applicant herself, rather than her assessors. In this way, Acknowledgement functions to persuade readers of the validity of the criticism, while protecting the credibility and positive face (see Section 2.4.4) of the reviewer.

#### 2.3.4.2 Contraction

Although both Expansion and Contraction involve indicating the subjective nature of the writer's stance, Expansion entertains alternatives, whereas Contraction functions to challenge or restrict them. That is, it construes a dialogic space with the aim of 'closing down' dialogue and suppressing alternative stances (White 2003, Martin & White 2005). Contracting evaluations can be achieved through the use of *Disclaimers* or *Proclaimers* (see Table 2.3). Disclaimers involve *denying* a particular stance, thus encouraging disalignment with it, or *countering* it in favour of another which is presented as preferable. Proclaimers are a means of defending a stance by excluding or rebuffing alternatives. This is achieved through *Concurrence* (either *Affirmation* or *Concession*), signalling agreement or assumed agreement with a stance, *Pronouncement* (either objective or subjective) where the explicit intervention of the authorial voice is used to strengthen a subjective claim, and *Endorsement* where the authorial voice indicates express alignment with an external voice or evaluation (Martin & White 2005). Some of potential effects of contractive evaluation are illustrated within the context of the NRF peer reviewer reports, together with an outline of the various Disclaimers and Proclaimers in the following sections.

#### (a) Disclaimers

The most straightforward type of disclaimer is **Denial**, which is linguistically sourced through negating words such as: *no, not, never, didn't*. It differs from ordinary negation in that its function is not just to deny a proposition, but to deny an expectation or assumption which the naturalised reader is construed as holding (White 2003, Martin & White 2005). **Counters** serve to replace the denied expectation with an alternative that the authorial voice presents as preferable or more correct/justified. Counters typically involve adverbials such as *although, however, nonetheless*, or conjunctions such as *yet* or *but* (Martin & White 2005). Denials and Counters often occur together and in the peer reviewers' reports, can be used to steer the readers away from a point of view which they may hold based on their information about the applicant or their perception of the scientific community. The reviewers who, throughout the reports, make an effort to present themselves as credible sources, are then in a position to make disclaimers based on their inside knowledge of the community or personal knowledge of the applicant, for example:

- *On the other hand* (Counter), *his performance is not* (Denial) *quite so outstanding as his self-appraisal suggests* (16; 283-284);
- *His past few years have been characterised by no slowing down of effort or impact; quite the opposite*...(Denial/Counter) (100; 164-165).

As the above examples show, Disclaimers can have either positive or negative consequences for the applicants, depending on whether the readers are encouraged to disalign with positive or negative evaluations. Provided that readers are willing to be aligned, Disclaimers, being "corrective rather

than confrontational” (Martin & White 2005: 120) can add an element of solidarity between writer and readers. They can also function as a deference politeness strategy as they avoid imposing a contrary evaluation without reference to the expected stance of the readers, which is construed as being a reasonable or ‘understandable’ attitude (even though it is then countered as incorrect) (White 2003, see also section 2.4.6).

## (b) Proclaimers

Unlike Disclaimers, Proclaimers do not explicitly negate and/or replace a proposition, but instead restrict possible dialogistic alternatives in order to provide support for a particular stance (Martin & White 2005). The first type of Proclaimer is **Concurrence** which construes a readership already aligned with and having the same value positions and knowledge as the writer (Martin & White 2005). The assumption that an evaluation or proposition being made is already accepted or taken for granted by the readers can be seen in adverbials such as: *obviously, naturally, clearly, surprisingly, amazingly, admittedly* or their expression as epithets. Rhetorical questions have a similar effect as they project an expected response (and as such require no ‘answer’). This is referred to as **Affirmation** (Martin & White 2005) and is heteroglossic in that it involves the marking of the subjective authorial stance and the expected reader stance towards a proposition, thus construing a ‘dialogue’. It is contractive in that it allows no space for readers who may not immediately ‘concur’ that something is *obvious, natural* or *amazing* (Martin & White 2005). Affirmation builds solidarity with compliant readers as it avoids the imposition of construing a shared attitude as one which requires persuasion. This may come across as patronising or assuming ignorance. Affirmation also has the effect of validating the stance of the compliant reader (Martin & White 2005) and is therefore commonly used as a solidarity politeness strategy (White 2003, see also section 2.4.6 and Appendix 1, Table 6.11). For example, in the peer review reports, one finds evaluations such as:

- *Research leading to better care of African wildlife is of **obvious** (Affirmation) benefit to SA society and the industries based on wildlife (102; 333-334),*

where Affirmation functions to protect the positive face of the readers by ‘granting’ them a stance they are expected already to have. Affirmation also serves to strengthen the positive evaluation made as it is construed as coming from the scientific community or simply ‘general fact’ rather than the reviewer him/herself. So although the subjectivity of the authorial voice is present, it can make the evaluation appear more objective than subjective. Similarly, in the example:

- *\*\*\*’s work is very well cited, despite the fact that there is an obvious (Affirmation) bias against African papers (16; 140),*

the intended effect is to fend off any resistance to the claim made, and to strengthen the effects of the previous evaluation (*\*\*\*'s work is very well cited*) as it construes a context of difficult working conditions. It avoids confronting the readers (and the scientific community) with an overtly challenging and rather negative claim (*there is a bias against African papers*) which would also deflect attention from the positive evaluation being made. Affirmation runs the risk of alienating non-compliant readers as it allows no space for resistant stances. However, it can also be used to align non-compliant readers, particularly where evidence or information (which the non-compliant reader may not previously have had) is presented and leads to an 'obvious' conclusion.

The second type of Concurrence occurs in conjunction with the Disclaimer, Counter, and is referred to as a **Concession** (or the category of 'concede') (Martin & White 2005). The linguistic mechanisms at play are an acknowledgement (used in the non-APPRIASAL sense) of an evaluation such as: *admittedly, sure, yes*, followed by a counter evaluation introduced by: *but* or *however* for example. Concession differs from Affirmation in that an evaluation or proposition is firstly presented as assumed common knowledge, but is then modified or even rejected in favour of another (Martin & White 2005). For example:

- *Certainly* research on such local ecosystems has *less international impact* (negative Valuation) than that on the polar front. *However, the impact for society might be much more important...* (double-coding: positive Tenacity and Valuation, also Entertainment) *in terms of...*(3; 254-256).

The *certainly...however* Concession steers reader alignment from one point of view towards another. Asserting the validity of the first evaluation and using Entertainment (*might*) to hedge the second is a more tentative and polite (and thus possibly more persuasive) way of aligning readers. It is still contractive, however, as it requires the second evaluation to 'intrude' upon and restrict the interpretation on the first.

Although the presence of the authorial voice is clear in formulations of Concurrence, it is not explicitly stated through the use of the personal pronouns *I* or *me*. The second type of Proclaimer, **Pronouncement** mostly entails this explicit foregrounding of the authorial voice in order to "assert or insist upon the value or warrantability of the proposition" (Martin & White 2005: 128). The writer overtly presents him/herself as having a stake in the proposition or evaluation made so as to 'vouchsafe' it and defend it from alternative propositions (Martin & White 2005). This would appear to suggest some anticipation of opposition from the readers who therefore need realignment, making Pronouncement more confrontational than other realigning strategies (such as Expansion or even Disclaimers) (Martin & White 2005). This confrontation may, however, be very subtle with

the Pronouncement appearing rather as a means to emphasise the commitment of the authorial voice to a particular stance. In my analysis I recognise and categorise separately two kinds of Pronouncement: *objective* Pronouncement and *subjective* Pronouncement (not all analysts are agreed on this separation: see Martin & White 2005: 133, White 2003: 264). Objective Pronouncement is a strategy where the subjectivity of the authorial voice is “obscured or impersonalised” (Martin & White 2005: 131) and involves the use of a variety of linguistic resources, for example: *the fact of the matter is, it is really* (emphasis), etc. (Martin & White 2005). Subjective Pronouncement presents an evaluation as “explicitly grounded in the speaker/writer’s subjectivity” (Martin & White 2005: 131) in formulations such as: *I contend, it is clear to me that...it is not* (emphasis) *the case that...* Although Martin & White (2005: 110, 132-133) argue that formulations involving high probability (e.g. *I’m sure*), and obligation and permission (e.g. *he must/should reconsider*) are the domain of Entertainment rather than Pronouncement, in the context of the peer reviewer reports, I analyse such formulations as Pronouncement if the co-text construes them as restricting rather than inviting alternative interpretations (see section 3.4.4). In the following example:

- *the quality of the candidate’s research during the last 7 years continues to echo that of previous years and must be seen* (objective Pronouncement) *as being very high* (12; 201-202),

I have categorised *must be seen* as objective Pronouncement rather than Entertainment because the authorial voice is insisting upon the evaluation expressed rather than presenting it as one of a range of options. In the next example:

- *He is intimately involved in conservation science here, and in my view* (subjective Pronouncement), *has helped to make South African attitudes and actions...among the most advanced in the world* (100; 72-74),

the reviewer is clearly aiming to defend his/her positive evaluation of the applicant (and the confirmation of credibility earlier in the report would seem to support this) rather than allow space for other, possible negative evaluations. For this reason I categorise it as subjective Pronouncement rather than Entertainment. This is not to say that *I think, in my view, in my opinion*, etc. cannot be used to entertain an evaluation. In many instances they clearly are expansive rather than contractive. However, their classification as subjective Pronouncement or Entertainment depends on whether they are used to express personal commitment or subjective speculation (see White 2003), and so attention to the co-text in which it appears is crucial. Pronouncement can have a variety of effects in terms of reader alignment, and they depend on factors such as: to whom the Pronouncement is addressed and what their naturalised reading position is, and what kind of evaluation is construed as requiring personal intervention from the writer for the purpose of encouraging alignment or disalignment (Martin & White 2005). In the first example above, the effect is to insist upon the evaluation made, without implying that the readers may need to be

persuaded to accept it. In the second example, the effect is to project an evaluation from a credible and authoritative source in order to validate it or strengthen the force with which it is received.

The third and final type of Proclaimer is **Endorsement** which refers to “those formulations by which propositions sourced to *external sources* are construed by the authorial voice as correct, valid, undeniable or otherwise maximally warrantable” (Martin & White 2005: 126, italics added). The main difference between Pronouncement and Endorsement is therefore the origin of the proposition: whereas Pronouncement involves foregrounding the writer’s attitude to an evaluation he/she has made, Endorsement concerns the writer’s attitude to the evaluation or claim of an external voice. Formulations for Endorsement are generally verbal processes that construe acceptance by the authorial voice and assumed acceptance by the readers, for example: *prove, demonstrate, show, represent*, etc. (Martin & White 2005; 126), or less grammatically congruent forms such as: *...the fact that..., convincingly argued, compellingly propounded, successfully explained* (White 2005; 270). Endorsement therefore differs from Attribution (Acknowledgement and Distancing) as, being contractive rather than expansive, it overtly presents the stance of the authorial voice in order to establish and support one stance over others (Martin & White 2005). Endorsement is not as common a feature of the peer reviewer reports as it is of strictly academic discourses of science, such as research reports (see section 2.4.3). However, one would expect it to be used in discussion of the applicant’s accomplishments, for example:

- *The article...nicely demonstrates* (Endorsement) *the expertise developed* (12; 231);
- *Other publications attest to* (Endorsement) *her competence in addressing a range of conservation questions...*(7; 180-181).

The effect of Endorsements can be to build solidarity with compliant readers, but it can also be a threat to non-compliant readers. However, being contractive, it discourages deviant stances by “increasing the interpersonal cost” (Martin & White 2005: 128) of adopting them, as they are presented as being outside not just the writer’s but the ‘generally accepted’ stance.

#### **2.3.4.3 Engagement in Texts: Reader Alignment**

The role of Engagement realisations in aligning readers I think has been adequately addressed in sections 2.3.4.1 and 2.3.4.2. However, on several occasions, when examining examples from my own data, the dependence of the situational and cultural context in which the peer reviewer reports are produced on the effects of the various Engagement strategies, comes to the fore as a critical element in measuring successful alignment. Alignment requires building solidarity, but the way in which this is achieved depends on far more than the general effects of expansive and contractive

heteroglossia. Some of the modifications I have made (such as separating subjective Pronouncement from Entertainment) indicate something of an incongruence between the grammatical realisations and their semantic effect, showing once again that APPRAISAL boundaries need to be flexible enough to accommodate co-textual variation and prosodic meanings (e.g. where *I think...* can be either speculative or defensive). In order to dig deeper into the contextual conditions that determine system choices, particularly with respect to how solidarity and alignment is achieved in the reports, I propose the inclusion of another dimension of analysis: politeness strategies and the notion of Face (Brown & Levinson 1978, 1987) (see sections 2.4.4 and 2.4.6). Work on the social and linguistic conventions of scientific discourse (notably that by Myers 1985, 1989, 1991, 1992, 1998, 1999, 2003 and Hyland 1994, 1996, 1998a/b, 2001, 2004, but also Skelton 1997, 1998a/b and Koutsantoni 2004) draws attention to the overwhelming influence of the aims and values of scientific research over scientific discourse and the many ways in which it is constructed. Myers (1989), for example, notes the presence of politeness strategies in written science articles as a means of persuasion and building solidarity. Because solidarity and persuasion are also of significance for the APPRAISAL system, I see the two perspectives as very closely related and well worth merging. This adds to the APPRAISAL Analysis as it promises to enrich our understanding of the influence of the context plane, and add an additional very important alignment mechanism. It also promises to strengthen and substantiate work on face and politeness by providing the semantic and lexico-grammatical realisations of politeness strategies and placing it within a systemic functional context which, I believe, is necessary for an improved account of its presence in scientific discourse.

## **2.4 Being Scientists and Writing Science: Appropriating Linguistic Behaviour**

### **2.4.1 Introduction**

The account provided in this section is concerned with the context of the culture in which the peer reviewer reports are produced. According to Halliday's model of functional grammar (see Figure 2.1), the context of culture is the broadest level of semiosis providing the foundation for all register, semantic and lexico-grammatical choices and is largely determinate of their realisations. It is critical that we investigate this level in any text analysis for a number of reasons. Firstly, the text analysis is based on the notion of language as inherently functional, as a 'social semiotic' construing a particular representation of the world (see section 2.2.1). The language choices in the peer reviewer reports are therefore constitutive of the way we talk about and understand science, and this link can allow for an explanation of why certain linguistic conventions and strategies are used rather than others. Secondly, language is inherently dialogic, always encoding an interaction

between individuals or perceived participants, and always indicating stance (see section 2.2.4.1). An explanation of some of the discourse conventions can also then be provided if we see them as social strategies functioning to construct a community of scientists characterised by shared knowledge, attitudes, values and aims. Thirdly, the context of the culture, or genre, comprises definable and more or less consistent patterns of language use. Thus any analysis of scientific discourse can contribute to a greater understanding of science and the collaborative production and dissemination of scientific knowledge.

There has been extensive research on the various conventions of scientific discourse and how it is uniquely suited to the needs and endeavours of the researchers working within the scientific community (e.g. Bazerman 1985, 1988, 1998, Becher 1989, Halliday & Martin 1993, Halliday 2004, Hyland 1994, 1996, 1998a/b, 2001, Martin & Veel 1998, Myers 1985, 1989, 1991, 1992, Skelton 1988a/b, 1997, etc.). In sections 2.4.3 to 2.4.5, I draw on this research in a discussion of the conventions of written scientific discourse and justifications for the identification of the peer reviewer reports as scientific discourse. In section 2.4.6, I address a particular convention, politeness, which is arguably the primary strategy for acceptance of a scientist's work by the community. My aim is to link politeness strategies with their APPRAISAL realisations and, in doing so, provide a more robust and stance-oriented account of politeness in scientific discourse, as well as adding an additional dimension to reader alignment as accommodated by the APPRAISAL framework. The following section, 2.4.2 classifies the scientific community as a 'discourse community' or a 'community of practice' (Swales 1990).

#### **2.4.2 The Scientific Community as a Discourse Community**

Where the production of scientific knowledge is viewed as a culture, the language of science a 'macro-genre' (as it encompasses a variety of discourses) and scientists themselves as constituting a community, the scientific community can then aptly be characterised as a 'discourse community'. This is based on Herzberg's perception that in a discourse community, "language use in a group is a form of social behaviour,... discourse is a means of maintaining and extending the group's knowledge and of initiating new members into the group, and that discourse is epistemic or constitutive of the group's knowledge" (Herzberg 1986: 1, cited in Swales 1990: 21). Inducting new members into the community is therefore a matter of socialising them into the discourse that constitutes this membership (Hyland 2000; see also Veel 1997). Although the community is obviously made up of individual scientists, many of whom are personally acquainted, it is indirect acquaintance through familiarity with one another's research, the appropriate discourse and the

correct use thereof, that construes the community as an entity with perceived norms and objectives, rather than as just a group of people. It is the regulatory mechanism of this perceived community that determines which research is to be endorsed and validated, and which is to be rejected and excluded from the existing knowledge (Myers 1985, 1992, 1998, Hyland 2000), hence, too, where individual researchers stand within the community. On a more specific level, the successful persuasiveness of individual texts also depends on observance of the group norms. As Hyland (2000: 8) points out: “notions of what counts as convincing argument, appropriate theory, sound methodology, impressive logic and compelling evidence are community specific”. The ways in which the conventions of scientific discourse construe this community are addressed in sections 2.4.3 and 2.4.4. To clarify in more detail what is meant by a ‘discourse community’, Swales (1990: 24-27) posits that it has the following features:

- “a broadly agreed upon set of common public goals;
- mechanisms of intercommunication among its members;
- [it] uses its participatory mechanisms primarily to provide information and feedback;
- [it] utilises and hence possesses one or more genres in the communicative furtherance of its aims;
- [it] has acquired a specific lexis, and;
- [it] has a threshold level of members with a suitable degree of relevant content and discursual expertise”.

Clearly these all apply to the scientific community. The ‘common public goals’ are the collaborative advancement of scientific knowledge, and the ‘mechanisms of intercommunication’ can be anything from personal correspondence to published papers. These would constitute the various types (or micro-genres) of scientific discourse. The ‘participatory mechanisms’ would include group discussions, research collaborations, peer reviewer reports, etc. Clearly science has a ‘specific lexis’ in the form of grammatical metaphor and specialised terminologies. This will vary from discipline to discipline and alerts us to the fact that the different areas of science (e.g. Thermal Physiology, Crustacean Endocrinology, Ecotoxicology, etc.) constitute discourse communities in themselves. In my analysis, I focus on Animal and Veterinary Science (which encompasses the areas of science just mentioned) as the relevant scientific community. This is because the discourse used in the reports analysed for this thesis appears to be uniform enough to allow an analysis of variation according to NRF rating category rather than individual disciplines. This would appear to be justified by work comparing different types of academic discourses, for example: Skelton (1988b) compares ‘hard sciences’ and humanities, Hyland (1998) compares the use of

metadiscourse across a variety of disciplines, Hyland (2001), compares ‘addressee features’ across disciplines, and Myers (1992) compares ‘knowledge claims’ in molecular genetics and linguistics papers. The differences found across these more dissimilar fields of research are not found across different areas of Animal and Veterinary Sciences, thus making it a plausible discourse community, broad as it is. The final feature mentioned by Swales (1990: 27), that the discourse community “has a threshold level of members with a suitable degree of relevant content and discursual expertise” is of particular pertinence to this research. Certainly, to be considered a member of the community requires a certain degree of proficiency and familiarity with the discourse conventions, but this is also true of an individual’s position within the community as evidenced, for example, by the NRF rating system. There is a hierarchy within the scientific community with the most powerful members being researchers who have produced a body of influential, accepted and widely cited work, and the least powerful members probably being students or those just beginning to produce original research. The NRF rating system further stratifies the top researchers by placing them into rating categories which indicate their relative eminence and standing within the community.

The way in which access to the community is controlled (either by specialised discourse or peer monitoring) requires ‘gatekeeping’ mechanisms. Gatekeeping is a concept developed in studies in anthropology, microethnography and interactional sociolinguistics to refer to situations where “normative ways of talking and interacting become the basis for inclusion and exclusion” (Sarangi & Roberts 2002: 201, see also Erikson 1975, 1976, 1986, Erikson & Schultz 1982). Discourse communities establish an out-group and an in-group based on conformity to the appropriate discourse norms. Members of the in-group are in a position of power where they can restrict access to the community, as well as all the benefits, rewards, power or esteem this access entails (Erikson & Schultz 1982, Sarangi & Roberts 2002). Out-group members are those who are prevented from accessing the community by gatekeeping mechanisms, which are put in place to protect the community as a distinct entity and the uniformity of its discourse. In the scientific community, for example, gatekeeping mechanisms are what prevent some articles from being published and others not (see Myers 1985 on the amendments that two scientific papers undergo before they are accepted by the ‘gatekeepers’, determining what is considered ‘acceptable’ and ‘appropriate’ in scientific discourse, also reported on in the following section). The NRF Rating System is in itself a series of gatekeeping mechanisms: the NRF Evaluation Centre determines which applications will be accepted into the system, the Assessment Panel determines which peer reviewer reports are considered suitable or appropriate to be included in the suite of reports for each applicant, and the reviewers, in the reports they write, instruct the Assessment Panel to specific ratings, the criteria for

which are defined by the NRF Evaluation Centre. It is worth considering the role of gatekeeping in the NRF rating system because it is, ultimately, what accounts for the stratification of rated researchers: reviewers place the applicants and their work within the community according to how far they conform to ‘good scientists’ and ‘good science’ respectively.

Much of the work on gatekeeping in linguistics (e.g. Fairclough 1992, 2001) has focussed on the oppressive role of those in the in-group, restricting access to those in the out-group who are disempowered as a result. Although this is certainly a consequence of gatekeeping, my focus is less on these negative effects and more on the role of gatekeeping in shaping and defining the discourse community and the relative status of those within it (e.g. a senior A1 researcher, a young Y1 researcher, etc.). I therefore prioritise the *functional* aspect of gatekeeping within the discourse community over the *ideological* aspect of gatekeeping in exclusion from the community i.e. I take a functional approach rather than a critical one. As Martin (1998: 10, italics added) points out: “Halliday...makes the strong claim that discourses *do not arise for reasons of status* (lawyers, for example, did not invent legal English in order to be associated with a privileged discourse). Rather, Halliday suggests, discourses evolve for *functional* reasons, having to do with what these can accomplish in newly emerging social contexts, which they take part in fashioning. The more functional the discourse in those contexts, the more status it will accrue”. I therefore also consider the stratification of scientists, rated or unrated, in the community, in terms of how it facilitates the advancement of scientific knowledge and the protection of a community dedicated to scientific advancement, rather than as an oppressive, exclusive institution. I find that this more positive approach focussing on community rather than hegemony (see Martin 1999, 2004c on Positive Discourse Analysis) can ultimately tell us more about how we interact and construe relationships through language: it is about far more than power and inequality, as the following section shows.

### **2.4.3 Dialogue and Audience Engagement in Scientific Discourse**

Talking or writing about existing scientific knowledge and research is a highly complex business. It must be remembered that although what science ultimately aims for is an ‘objective truth’, and certain knowledge is accepted as such, it cannot ever be proven empirically as such, and thus involves cycles of theorising and re-theorising rather than the discovery of truth (see Kuhn 1963, 1970 on the social construction of scientific knowledge). For this reason, theories need to be accepted and conferred status by the members of the scientific community if they are to be granted a place in the existing (and accepted) body of knowledge, and this is achieved through the discourse as much as any external validation (Myers 1985, 1992, Hyland 2000). What this implies is that

whenever scientists write or talk about research, they necessarily encode a stance towards it regarding its significance and credence within the greater body of knowledge. Where the work is accepted as dogma or 'black box' knowledge (Bazerman 1998: 16), this assumption is implicit in the way it is presented i.e. as fact rather than conjecture. Where new knowledge is presented, more complex linguistic strategies are involved. Presenting novel research requires careful negotiation of the tension between pursuing individual credit and recognition, and showing respect for the field of knowledge on which the individual's own contribution is based (although a discourse community has a common set of goals, there is likely to be a certain degree of tension between those and the goals of the individuals within the community). In order for a contribution to be publishable, it *must* contribute something new, which necessarily threatens, to a greater or lesser degree, the stability and value of the existing research (Myers 1985, 1989; Hyland 1994). This tension is, arguably, the basis for all the dialogic conventions of scientific discourse: it requires assertions always to be made with consideration to the audience (what we could call a 'naturalised readership' – see section 2.2.4.1) to whom deference must be shown, as a way of assuring one's own credibility as a member of the discourse community, interested in protecting and valuing it above all else. Individual researchers therefore need to enact a careful balancing act in their writing. As Hyland (1994: 241) puts it: "writers must present themselves as servants of the discipline while asserting an individual contribution", and Myers (1989: 4): "the relative differences in power between individuals ... are supposed to be small...[and] the community as a whole is supposed to be vastly more powerful than any individual in it". For those new to the community or trying to attain a place within it, learning the appropriate discourse may be challenging and problematic without sufficient knowledge of the interpersonal functions of scientific discourse. The pitfalls encountered by those who do not master the discourse are an indication of how real respect towards and protection of the community as a whole, rather than the individual, really is. This has been further authenticated by research (see discussion below) on the fashioning of scientific discourse for specific purposes.

In his analysis of the drafts leading up to publication of two biology articles, Myers (1985) examines the amendments made to the language used in the articles as recommended by the journal editor and reviewer. He finds that it is the 'knowledge claims' (i.e. the claims concerning the status and value of the research) that are considered most contentious and require amendments, for example saying: *the conclusion is X*, rather than the more tentative: *one might conclude that...* The editor and reviewers moderate the more confident claims made by the researchers in order to protect the existing body of research it challenges, the researchers who produced it, and the readers of the journal. Only once this degree of tentativeness is incorporated are the articles considered

acceptable for publication (Myers 1985). Not only does this have the interpersonal effect of showing deference to other researchers in the community and avoiding over-assertiveness, but it has an ideational effect too, as the knowledge claims play a central role in determining the value of the research for the community. Myers (1992) shows that the effect of using certain verbs for a research article's central knowledge claim (such as *report, claim, show, demonstrate, present, propose* etc) determines for readers, and the community as a whole, the place of the research in terms of its objectives and implications. Significantly, though, these choices are always made with the audience in mind, thus highlighting the very weighty influence of the discourse community on the type of discourse produced.

A type of linguistic formulation frequently explored in research on scientific discourse is 'hedging'. Hedging is a term coined by Lakoff (1972) to refer to words that adjust the degree of exactitude of a statement or claim (make them more or less 'fuzzy'), for example words like: *possibly, perhaps, apparently, maybe, suggest, seems, assume, could/might/may, somehow*, etc. (c.f. section 2.3.4.1 on Expansion, where such words are viewed in terms of the dialogic space they allow). Negative interpretations of hedging as indicating uncertainty, imprecision or lack of commitment (e.g. the work of Prince, Frader, & Bosk (1982) examining hedging in medical discourse, discussed in Skelton (1988a/b)) have given way to more positive interpretations of their use in academic discourse. It is not seen always as an indication of vagueness or uncertainty but, instead, as a calculated interpersonal strategy with clear ideational, interpersonal and textual functions. Hedging is hugely prevalent in scientific discourse for a variety of reasons. Hyland (1994, 1996) and Myers (1985, 1992) highlight its function as an indication of deference to the scientific community. It is threatening to be too assertive and assume acceptance of one's research findings, but, at the same time, researchers do want their work to be accepted. Using a construction such as: *these findings appear to suggest that...* rather than: *these findings prove that...* therefore indicates tentativeness not necessarily because of any uncertainty on the part of the individual scientist about his/her findings (although this would be a wise strategy for saving his/her credibility should the findings then be disproved), but, instead, caution regarding how they might be received and what status they might eventually obtain. Hedging is an important feature of scientific discourse because "it allows claims to be made with due caution, modesty and humility, and the status of such claims to be diplomatically negotiated when referring to the work of colleagues and competitors" (Hyland 1994: 241). It is an aspect of the discourse that needs to be learned in order to produce texts acceptable in the community as it is "the mark of a professional scientist" (Crismore & Farnsworth 1990: 135,

cited in Hyland 1994: 241. See also Hyland 1994 for teaching materials designed to assist L2 learners with this kind of discourse).

One of the ideational effects of hedging is, according to Skelton (1988b:98), that it is “a tool for making thought subtle rather than fudged” and that it allows us to “use language with subtlety, to mean precisely and with discrimination” (1988b: 107). This is in reaction to studies that denigrated it for construing ‘uncertainty’ (e.g. Prince *et al* (1982)), however, it also points, once again, to the functional nature of the scientific discourse (see end of section 2.4.2). Hedging in this ideational sense provides a more realistic picture of what the production and validation of scientific knowledge is like: trying to reach a point of understanding by building and walking through a maze rather than along a straight path. It also has a textual effect of indicating the delicate and complex navigation through this maze i.e. links between what is considered ‘fact’ and what is considered ‘inference’, and the stances of the researchers and the community involved in building this knowledge (Skelton 1988a/b, also Hyland 1996). The interpersonal effects of this and shows of deference protect the scientific discourse community, not by restricting access to the elite and disempowering the success and recognition of individuals (although undoubtedly it can have this effect, particularly where proper support for those attempting to become members of the community is not provided, in educational institutions for example). Instead, these discourse conventions represent a ‘genesis’, more specifically ‘phylogenesis’: the expansion of cultural semiosis (Martin & White 2005: 26), in the development of scientific knowledge (Veel 1997). They have developed to adapt to the aims of scientific research, both in terms of a quest for a greater understanding of the world, but also in terms of how it can serve society and industrial development (see Halliday & Martin 1993, Halliday 2004). An individual researcher with full competence in this type of discourse, is in a strong position to make his or her own research very persuasive to the community through its ‘polypragmatism’ (Hyland 1998) i.e. enacting a variety of functions simultaneously.

The tentativeness and deference evident in scientific discourse can also be viewed as a form of politeness, suggesting that such features can be more clearly understood if analysed as such under politeness theories such as Brown & Levinson’s notion of participants’ ‘faces’ and ‘saving face’ in interaction. Myers (1989) demonstrates how Brown & Levinson’s theory, originally confined to spoken conversation, can usefully be applied to written texts. He shows that an analysis of politeness strategies in scientific research articles can provide insights into the ways in which researchers negotiate the tension between making original claims, and paying respect to the

community. In the following section, 2.4.4 I show how Myers uses Brown & Levinson's framework to analyse these features. I then consider the peer reviewer reports as scientific discourse and in what ways they are expected to differ and/or be similar to the scientific discourse explored in the existing literature (section 2.4.5). Finally, in section, 2.4.6, I provide my own take on politeness in scientific discourse from the perspective of APPRAISAL Analysis.

#### **2.4.4 Politeness and Saving Face in Scientific Discourse**

Classic work by Brown & Levinson (1978, 1987), based on Goffman's (1967) concept of 'face', explores the incidence of 'face-saving' politeness strategies in conversation, used to 'redress' utterances that are potentially threatening to one or all of the participants involved (these are referred to as FTAs: Face Threatening Acts (Brown & Levinson 1978)). According to Brown & Levinson, there are two dimensions of face: *positive* face and *negative* face. Positive face is the wish of an individual to present and maintain a 'self image' that is socially commendable, and negative face is the wish to maintain a personal space that is not imposed upon by others, and allows the individual some freedom to speak or act as s/he chooses (Brown & Levinson 1978: 67). The types of FTAs associated with the positive face of the hearer (i.e. threaten their positive self-image) are: criticisms, insults, accusations, reprimands, ridicule, uncontrolled emotion or bringing up taboo or disagreeable topics. FTAs threatening the positive face of the speaker include: apologies, confessions or admissions of guilt, accepting compliments, or actions that humiliate/embarrass the speaker in some way. With regard to the negative face, FTAs threatening the speaker (i.e. constraining him/her in some way) include: thanking, accepting thanks or offers, and those threatening the negative face of the speaker: orders, requests, reminders, threats, warnings, promises, compliments or expressing emotions directed towards the hearer (Brown & Levinson 1978). It is worth pointing out that Brown & Levinson's definition of FTAs comes from a specifically western cultural vantage point, and this is the vantage point I am taking in my analysis, as it appears to be conventional in scientific discourse (see Myers 1989, for example).

It is almost impossible to avoid FTAs: apologising, thanking, expressing emotion, etc. are a necessary part of everyday conversation. Face can be lost, saved or enhanced and participants therefore make a consistent and often subconscious effort to maintain both their positive and negative face and (generally) those of others (Brown & Levinson 1978). The negotiation of FTAs in conversation can be very delicate, particularly where the potential threat of face-loss is great. FTAs can be made 'baldly' without any 'redress' if the aim is to damage a participant's face (e.g. *Your work is poor, I've done a terrible job*) or if the relationship between participants and the

nature of the interaction is such that the FTA involves a constraint of a positive nature, or is not likely to be perceived as face threatening (e.g. an order: *have rest now, come in, help yourself*). Frequently, however, FTAs are redressed through the use of face-saving strategies (Brown & Levinson 1978). Strategies to protect positive face can also be referred to as ‘solidarity politeness’ and those protecting the negative face, ‘deference politeness’ (Scollon & Scollon 1983).

Solidarity politeness works towards emphasising the perceived commonality between participants, thus reducing status or power differences and creating a feeling of camaraderie or in-group membership (Scollon & Scollon 1983). Solidarity politeness strategies include: indicating or assuming this commonality of attitudes, knowledge, group membership, etc., showing interest, agreement and optimism, and ‘giving gifts’ (such as acknowledgements and compliments) (Brown & Levinson 1978, Scollon & Scollon 1983). Deference politeness works towards maintaining the status/power distance between participants (although this often has the effect of building solidarity, as it protects the community as a whole – see Chapter 4, section 4.3.2.2) thus reducing the possibility of any imposition on either the speakers or hearers. It calls for humility, restraint, and showing respect, and it recognises rather than downplays the threat (Brown & Levinson 1978, Scollon & Scollon 1983). Strategies include: apologies, tentativeness, attributing an intrusion to someone or something else, not presuming shared attitudes or knowledge, etc. (Scollon & Scollon 1983).

Myers (1989) extends this approach to face and politeness, arguing, as I mentioned earlier, that they occur and can therefore be analysed in much the same way in written texts as in conversation. In an analysis of scientific research articles, Myers (1989) points to the prevalence of both solidarity and deference politeness strategies and their highly functional use in maintaining good working relations amongst scientists, and creating a discourse appropriate for the advancement of scientific knowledge. According to Myers (1989: 7-12), solidarity politeness strategies in research articles include:

- Indicating group membership, shared attitudes/knowledge and commonality of goals and values, for example using an inclusive ‘we’, expressing emotional responses and reactions that readers are expected to identify with words such as: *obviously, unexpectedly, surprisingly, unfortunately, etc.*;
- ‘Giving gifts’ (Brown & Levinson 1978) in the form of citations of other researchers’ work, acknowledging other researchers in the text as well as the existing research and literature on which the individual’s research is based (even if it is then to refute that research);

- Humour and jokes: these indicate an assumption of shared attitudes, thus involving the community in the individual's research endeavours e.g. *the selfish nerd hypothesis* (example from Myers 1989: 10);
- Avoiding any self-elevation, especially where it may be at the expense of other researchers in the community: this would threaten the stability of the delicate networks of research partnerships and collaborations on which the advancement of scientific knowledge depends. It is in the best interests of the individual researcher to respect this as it is consensus from the community which will ultimately determine the value of the research for the existing body of knowledge.

Deference politeness strategies in research articles include:

- Making claims more personal and attributable to the individual researcher: seemingly more subjective and open to controversy. This avoids the imposition of assuming the readers or community of scientists have accepted the claim, when they may well not have, particularly if it is new knowledge e.g. *this suggests to us that...*;
- Hedging, which has a similar effect to personalising claims;
- Depersonalising statements i.e. construing them as emanating from something other than the individual researchers e.g. *this evidence leads to the conclusion that... rather than: our conclusion is...* This attributes the conclusions to the science rather than the scientists, avoiding the imposition of individual assertion;
- Apologies and excuses: where a claim or statement that might be interpreted as inappropriate or impolite, is anticipated and indicated as such in order to acknowledge the researchers' awareness of the expected conventions and the fact that they might be breaking them e.g. *I hope...will forgive me...* (example from Myers 1989: 20).

This division of features into solidarity and deference politeness is supported by other analyses of scientific discourse. For example: Thomson & Zhou (2000) and Thomson (2001) show that for successful alignment of the reader ('arguing with the reader'), hedging avoids the imposition on the part of the writer of presuming to know the readers' stance (although the fact that it is hedged shows that the writer does presume to know it). This corresponds to deference politeness. The use of the 'inclusive we/us' and indicating certainty (i.e. that the stance and attitudes of the readers are assumed and that this is taken-for-granted rather than a possible imposition) are shows of solidarity with readers, emphasising group membership rather than individuality. Additional solidarity politeness strategies include: personal intervention into the text and personal commentary (Hyland 2001, 2004), playing 'devil's advocate' or adopting a temporarily dissident stance for the sake of

argument (Myers 1991, 1998, Hyland 2001), and assuming shared knowledge and attitudes (which translates into group membership) which in a text can “recruit the reader as a partner in the argument by pointing to some expected knowledge” (Hyland 2001: 568). Deference politeness strategies include hedged directives e.g. *now consider the possibility that... it is therefore necessary to....* This is a way of adroitly navigating readers through the various claims and stances encoded in the text (Hyland 2001). In addition, rhetorical questions rely on a relationship of solidarity for the ‘answer’ to be assumed, and open questions indicate some kind of uncertainty on the part of the writer, concerning the readers’ knowledge or attitudes, and invite the readers to engage with this uncertainty, or simply to acknowledge it or address it themselves (Martin & White 2005).

#### **2.4.5 Peer Reviewer Reports as Scientific Discourse**

The research on scientific discourse I have been discussing so far has mainly focussed on written science, such as research articles and reports, with Myers analysing a more diverse array including article reviews (Myers 1985), spoken science i.e. group discussions (Myers 1998, 1999), written communication in collaboration projects (Myers 1991), and popular science (Myers 2003). There has also been extensive research on school science and science textbooks (e.g. Myers 1992b, Parkinson & Adendorff 2005, Veel 1997). By contrast, there has been no research on data anything like the peer reviewer reports I analyse: scientists writing about each other and each others’ work for a highly prestigious and sought after accolade, which establishes a clearly defined hierarchy amongst scientists in South Africa, and internationally.

I believe that the peer reviews are a unique type of scientific discourse for a number of reasons, deriving both from the context of their production and the specific linguistic features used. There is also, of course, a great deal that also distinguishes them from any other type of scientific discourse, and makes them possibly more useful in providing insights into the nature of the scientific community, its values and aspirations, and the relationships amongst scientists. This is evident in the three sections into which the reports are divided: Knowledge of the Applicant, Appraisal of the Applicant’s Work, and Estimation of the Applicant’s Standing. These correlate with: a definition of the professional and personal networks to which the applicants and the reviewers belong, an assessment of the status of the work within the existing body of scientific knowledge, and an estimation of the position of the applicant within the hierarchy of scientists nationally and internationally. In terms of the context in which the reports are produced, they qualify as scientific discourse because they are produced by individuals in their capacity as researchers who are a part of the scientific community, involved in the practice of identifying and reinforcing the norms

concerning what is expected of the community and individuals within it. So in terms of scientific discourse, the reviewer reports are probably the most explicit indication of the discourse community in which scientists operate. They focus on networks and relationships between individuals and their work, and overtly announce the status of the research and locate the scientist within the community, rather than just allude to it.

In terms of the register, the tenor is very different in peer reviewer reports than it is in research articles, for example. Flech (cited in Myers 1989) identifies two different audiences construed in research articles: an 'exoteric' audience which consists of other researchers involved in the specific field and have contributed to it through their work, and the 'esoteric' audience which includes the casual reader, researchers in other fields, and anyone who simply reads or takes an interest in the research, but has no direct involvement in its production. The construal of these different audiences (and possibly multiple audiences) is even more evident in the peer reviewer reports than in other types of scientific discourse. Firstly, there is the NRF Evaluation Centre which initiates the reports and the NRF Assessment Panel who read them and then allocate a rating based on them. The NRF would constitute the exoteric audience. In addition, there is a strong presence of the scientific community in the discourse (for example, references to other researchers, other research, institutions and knowledge-producing bodies, etc.). This and the presence of discourse semantic and lexico-grammatical features consistent with those found in conventional academic discourse (e.g. solidarity, deference, etc.) indicates engagement with an esoteric audience too i.e. other scientists in the community, but in this case both those directly involved in the field and those that are not. This may be partly because the reviewers expect some members of their specific community to be readers (i.e. the experts on the Assessment Panel), but it is also because scientific discourse has evolved to construe this audience, regardless of whether they are the actual readers or not. Reviewers generally give consent for feedback from their reports to be conveyed to the applicant, making attention to the applicant an additional factor in the construction of the reports. So audience construal and engagement in reviewer reports is likely to be more complex than in, say, research articles.

The types of linguistic features found in the reviewer reports include: a great deal of explicit and focussed evaluations and a great number of politeness strategies functioning to mitigate the threat that evaluation carries, indications of writer-audience solidarity, and some depersonalisation of statements/evaluations, but predominantly a strong and overt presence of the reviewer's individual voice. All these are designed to persuade the readers of the reviewer's credibility, his/her

assessment of the applicant, and the recognition he/she thinks that the applicant deserves. The general consistency of features found across the reports seems to be partly a result of the instructions provided by the NRF concerning how the reports should be structured (see Appendix 5), and partly because the general conventions of scientific discourse are carried over into the reviewer reports and provide a similar regulation mechanism concerning what is or is not appropriate (c.f. section 2.4.2). An expected outcome of my analysis is to provide a detailed investigation of what the linguistic conventions for this specific type of discourse are. APPRAISAL Analysis is the most effective interpretive framework for investigating (a) the various types of evaluations the reviewers commit to (Attitude), (b) how these are adjusted according to degree and intensity (Graduation) and (c) how the reviewers engage with the audience in order to present stance and position readers to take a stance too (Engagement) (see section 2.3). An important aspect of engaging with readers which APPRAISAL only implicitly addresses is politeness: features employed for anticipating and acknowledging reader stance, rather than just presenting stance. In the following section, I show how I have sought to understand the politeness strategies discussed in section 2.4.4 in terms of APPRAISAL.

#### **2.4.5 APPRAISAL and Politeness in the Peer Reviewer Reports**

An APPRAISAL account of politeness strategies promises to be valuable from a number of perspectives. There is a clear parallel between studies in pragmatics (e.g. Myers 1985, 1989, 1991, 1992a/b, 1998, 1999, 2003; Hyland 1994, 1996, 1998a/b, 2001, 2004, etc.) and studies in functional grammar: both are concerned with the utility of language in constructing relationships and performing various acts, ideational and interpersonal. Clearly pragmatics and functional grammar can support and complement one another in research such as this. APPRAISAL can make work in pragmatics more robust by making very explicit the strategies concerning attitudes and stance that underlie the interaction in and maintenance of the community. Including politeness in an APPRAISAL Analysis enhances the take on interpersonal work done in conversation, particularly persuasion and alignment. This is useful for the reviewer reports, where, as I show in section 2.3.2.4, some of the APPRAISAL choices can only be accounted for with reference to the underlying discourse conventions of the community in which they were produced.

There is a clear overlap in the features discussed in section 2.4 and the APPRAISAL features discussed in section 2.3. The description of deference politeness strategies (Myers 1989) includes APPRAISAL categories such as: Entertainment, subjective Pronouncement and downscaled/softened Graduation (hedging), Attribution, objective Pronouncement (a depersonalising strategy), and

subjective Pronouncement (a personalisation strategy indicating subjectivity). Solidarity politeness includes APPRAISAL types such as: Affirmation (an indicator of group membership) and subjective Pronouncement (a personalising strategy, also indicating group membership). Disclaimers can also be used as a persuasive strategy to align readers while mitigating threats to both positive and negative face. A more detailed correlation of the APPRAISAL categories and solidarity and deference politeness, together with some examples from my texts, is provided in Tables 2.4 and 2.5 to follow. Koutsantoni (2004: 178) has offered a similar comparison between APPRAISAL categories and forms designed to build solidarity with readers: ‘attitude markers’, ‘certainty markers’ and ‘common knowledge markers’ which are also forms of solidarity politeness. She shows that different types of Engagement and Attitude function to indicate the inclusive nature of research, thereby co-opting readers into the knowledge-building process and reaffirming their role as members of the discourse community. I aim to focus on deference politeness as well as solidarity politeness, and on the polyphonic APPRAISAL types only (Attitude, Graduation and Engagement) to demonstrate the extent to which APPRAISAL explains how politeness strategies work in texts. In tables 2.4 and 2.5, I provide a very basic indication of the main correlations between Brown & Levinson’s (1978) and Myers (1989) politeness strategies and the APPRAISAL categories they would appear to embody. It must be acknowledged here that this correlation is not always as straightforward and simple as tables 2.4 and 2.5 would appear to suggest. Because a peer reviewer report is in itself an FTA, with every evaluation a possible FTA that could be redressed, what I have counted as politeness strategies depends to a significant extent on the context and the co-text in which they appear, and they are therefore subject to reader/analyst interpretation. Additionally, because the reports are so heavily evaluative, the APPRAISAL categories which are working specifically as politeness strategies and those which are not, are not always easy to distinguish. My methods for categorising the different politeness strategies and how I have addressed potential problems such as those mentioned above are discussed in Chapter 3, Section 3.4.5.

**Table 2.4 Solidarity Politeness Strategies and APPRAISAL Manifestations**

Politeness Strategy	Examples (politeness in bold)	APPRAISAL Categories
<p>Construing an attitude or evaluation as shared or assumed.</p>	<p>***** <b>undoubtedly</b> is <i>one of the spearheads of marine ecology in southern Africa</i> (100; 309); Affirmation, Positive Reaction.</p> <p>the <b>curious</b> suppression of fertility in socially subordinate female rats (101; 351). Positive Reaction.</p>	<p>Affirmation, Reaction.</p>
<p>Acknowledging that an evaluation/attitude to be disclaimed is understandable or rational and even shared by the authorial voice (appraiser).</p>	<p>These studies <b>"re-opened"</b> issues that were <i>considered "sacred cows"</i> for fruitful discussion (12; 76-77). Endorsement, Distance, Acknowledgement, upscaled presence.</p> <p>It was a <b>very attractive theory</b>, as <b>it explained</b> the purpose of the prominent carotid rete in animals that were very likely to be exposed to heat stress. <i>Prof *** and his team have shown, much to everyone's disappointment</i> (12; 130-132); Positive Reaction, Endorsement, Counter.</p>	<p>Counters and Concessions (Entertainment, Attribution or proclainers followed by a disclaimer); often positive and negative Attitude juxtaposed (see opposite) or linked by a counter marker (e.g. <i>but, however, yet, although</i>).</p>
<p>Personalisation: inclusion of the authorial voice.</p>	<p><i>If we extend the comparison...</i> (3; 37); <i>...he's done an excellent job of why we need to pay particular attention to insects, that is, why we cannot make conservation decisions on the basis of (say) just elephants.</i> (16; 129-130).</p>	<p>Subjective Pronouncement, self evaluations.</p>
<p>Reference to other researchers in the community: corresponds to citations in research papers and 'giving gifts' (Brown &amp; Levinson 1978).</p>	<p><b>Thanks to Prof*** and his group</b> (12; 339-340); <i>Her research would not be possible without the surgical expertise of Professor Graham ***</i> (4; 187-188).</p>	<p>Positive Attitudinal evaluation of individuals in the research community (not the applicant), sometimes Acknowledgement too.</p>

Rhetorical questions.	<i>Professor *** works as part of a group – <b>who does not these days?</b></i> (15; 46).	Affirmation: the answer to the question is construed as ‘obvious’.
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**Table 2.5 Deference Politeness Strategies and APPRAISAL Manifestations**

Politeness Strategy	Examples (politeness in bold)	APPRAISAL Categories
Hedging.	<p><i><b>Reasonably</b> productive</i> (8; 169), <i><b>fairly</b> average</i> (8; 170). Quality (downscaled).</p> <p><i>There are <b>perhaps not as many</b> conference presentations and key note addresses <b>as one might expect</b></i> (101; 22-23). Entertainment, number (downscaled), Entertainment.</p> <p><i>*** <b>does tend to publish a little too frequently</b> in <i>Biodiversity and Conservation</i></i> (16; 163-164). Process (downscaled), mass (downscaled).</p> <p><i><b>I would be more impressed</b> if there were <b>fewer publications, but with an occasional one</b> in a <i>top-ranked journal</i>.</i> (16; 297-298). Subjective Pronouncement, upscaled process (hypothetical), Counter, upscaled number (hypothetical).</p>	Entertainment, Concessions, Counters, subjective Pronouncement, downscaled Force, softened Focus (often operating together).
Personalisation.	<p><i><b>I rate him very highly indeed</b></i> (22; 30). Subjective Pronouncement.</p> <p><i>Mole-rats of the family <i>Bathyergidae</i>, of which <b>I believe</b> there are <b>about a dozen</b> species</i> (101; 311-312). Entertainment.</p>	Subjective Pronouncement, Entertainment.
Depersonalisation.	<p><i>These studies <b>"re-opened" issues</b> that were <b>considered "sacred cows"</b> for fruitful discussion and <b>urged reconsideration</b> of...</i> (12; 76-77). Upscaled process, agent omission.</p>	Objective Pronouncement, (agent omission), Endorsement.

	<p><i><b>This shows that Prof *** has a leading role in the group.</b></i> (3; 63-64). Endorsement.</p> <p><i><b>Clear indications of his international stature and respect can be seen in...</b></i> (102; 110-111). Objective Pronouncement.</p>	
Apologies and excuses.	<p><i><b>I must quickly say that here I am being highly 'picky' and perhaps riding a personal hobby-horse</b></i> about biologists who <b>may be</b> more concerned with the natural history of a species than about fundamental biological questions (101; 386-387).</p>	Entertainment, subjective Pronouncement, Concession.

## 2.5 Conclusion

In this chapter, I have provided an overview of the theoretical backdrop to the analysis of the peer reviewer reports, informing both the methods for the analysis and their interpretation with the aim of answering the research questions. I begin in section 2.2 with Systemic Functional Linguistics and the basic assumptions of language and language use it proposes. The idea of language as a resource, and the evolution of grammar as a functional system used to construe our understanding of reality and community, is fundamental to SFL and to this thesis. In order to explore how grammar construes our perceptions of the world, I identify a network of systems focussing on different perspectives of language use, known as metafunctions: the ideational metafunction, the interpersonal metafunction and the textual metafunction. I also interpret the grammar in varying degrees of specificity, ranging from the more specific (i.e. the phonology/graphology) to the less specific (i.e. the culture or situation) (see Figure 2.1). Although the priority is on systematised meanings (specific lexico-grammatical selections within clauses) structured meanings that are generated across clauses or clause complexes are also considered in terms of their role in influencing system selections. Section 2.3 focuses on APPRAISAL Analysis which provides the analytical framework for this research. APPRAISAL is an extension of the interpersonal metafunction which addresses reader/writer or speaker/hearer relationships between participants in interaction, and it allows for a thorough and detailed analysis of interaction that includes investigations of: the expression of evaluations and attitudes, and the instruction (alignment/disalignment) of readers to take up certain reading positions and points of view. I utilise the full APPRAISAL framework as

provided by Martin & White (2005) which involves the analysis of three interrelated systems: Attitude, Graduation and Engagement (see Figure 2.2). Finally, in section 2.4, I move beyond the content plane (lexico-grammar and discourse semantics) which is the focus of sections 2.2 and 2.3, to the context plane, specifically the context of the culture of the scientific discourse community. The context of the situation i.e. the NRF rating system has already been described in detail in Chapter 1. In section 2.4, I identify the scientific community as a discourse community and the peer reviewer reports as a type of scientific discourse. With consideration to the role of scientific discourse in persuading and aligning readers, I proposed an additional dimension to the APPRAISAL Analysis: politeness strategies (based on Myers 1989). An analysis of politeness strategies as an interpersonal resource which can be understood in terms of the APPRAISAL framework, I believe can account for some of the APPRAISAL choices made by the reviewers, and allow for a more nuanced understanding of instruction and evaluation in the reviewer reports. In the following chapter, I describe in detail the data used, how I undertook the analysis of Attitude, Graduation, Engagement and politeness strategies in the reports, and how I interpreted this analysis in order to answer the research questions posed.

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### **3.1 Introduction**

This chapter describes the methods for analysis that I employed: the data I selected, the APPRAISAL Analysis I carried out, and how I interpreted it. The chapter is divided into three main sections. The first, section 3.2, provides the justification for the peer reviewer reports I selected for analysis, and details of the reports and the applicants they assess. Section 3.3 justifies the use of SFG and APPRAISAL Analysis as the principle means of better understanding the functioning of the rating system. Section 3.4 sets out the methods I employed when categorising the interpersonal meanings under the APPRAISAL Framework, with the addition of politeness strategies (the tabular analyses of the APPRAISAL Analysis can be found in Appendices 19-29, Tables 6.23 to 6.66). I show how I have sought to accommodate structures of meanings together with meaning systems and how I have dealt with the challenges or difficulties such an analysis can present.

### **3.2 The Peer Reviewer Reports**

#### **3.2.1 Sourcing and Selecting the Reports**

Peer reviewer reports for a number of researchers awarded NRF ratings were provided by the NRF for the purposes of this research. The reports supplied by the NRF were for researchers rated in the fields of Animal and Veterinary Sciences (ANIM), Anthropology, Development Studies, Geography, Sociology and Social Work (ADGSS). The rating system is, however, far wider in its scope than this and covers a variety of fields in the social sciences and humanities as well as the sciences and engineering. The full range of fields in which the NRF have rated researchers are:

In the Social Sciences and Humanities:

- Anthropology, Development Studies, Geography, Sociology and Social Work;
- Communication, Media Studies, Library and Information Sciences;
- Economics, Management, Administration and Accounting;
- Education;
- Historical Studies;
- Law;
- Literary Studies, Languages and Linguistics;
- Performing and Creative Arts, and Design;
- Political Sciences, Policy Studies and Philosophy;
- Psychology;
- Religious Studies and Theology;

And in the Natural Sciences and Engineering:

- *Animal and Veterinary Sciences*;
- Biochemistry, Molecular and Cell Biology;
- Chemistry;

- Earth Sciences;
- Engineering;
- Health Sciences;
- Mathematical Sciences;
- Microbiology and Plant Pathology;
- Physics;
- Plant Sciences.

I chose to analyse reports for researchers rated in the field of Animal and Veterinary Sciences (in italics above) for several reasons. Firstly, this is a field very different from my own (Linguistics) in terms of research aims and methods and, most importantly, in terms of the discourse practices (see Skelton 1988b, Myers 1992, Hyland 2001, also section 2.4.3). This means that the discourse analysis involves scrutiny of linguistic features and meanings which are somewhat unfamiliar to me and are therefore unlikely to be adversely affected by a ‘taken-for-granted’ perspective. Secondly, because I have never worked in this field nor know any of the researchers working in it, the confidentiality of the applicants and the rating process remains protected. Thirdly, there has been extensive research on scientific discourse in Linguistics (see section 2.4), and because I identify the reports as a type of scientific discourse (see section 2.4.5) the research promises to contribute to this area of knowledge, in addition to exploring the workings of the NRF rating system. Finally, although I am not overly familiar with Animal and Veterinary Sciences, it is an area of science in which I am interested and I have read far more of this kind of scientific discourse (admittedly popular rather than more specialised forms) than, say, Chemistry or Mathematical discourse, making it nonetheless accessible to me. The reading position of the analyst (including background knowledge, attitudes, and analysis agenda) together with that of the construed and actual readers, needs to be taken into account in any discourse analysis, and particularly this research where I am aiming to answer a specific set of research questions rather than assign ratings, which is the purpose for which the reports and the rating system are designed.

I selected reports for researchers rated in the top category of each of the main rating bands i.e. A1, B1, C1 and Y1 (see Table 1.2 for details of these rating categories). There are additional categories within these rating bands (i.e. A2, B2, B3, C2 and C3 - see Appendix 6 for details of these rating categories), but to allow my analysis to cover as broad a range of rating categories as possible, I made the rating band the only variable. The top category is also most likely to represent the ‘essence’ of the rating band, as the main criterion for such ratings is maximal consensus amongst reviewers concerning the applicants’ standings. The A, B and C rating bands constitute the core of the rating system, and are reserved for established researchers, with

some experience and stature in the field. I chose to include the Y1 category because young researchers, who would fall into this category, embody the next generation of major, established researchers and are, presumably, working towards A, B or C ratings in the future. It is possible that the reports for these young researchers, striving for a place in the field, can provide insights into what is required for consideration as an ‘established’ researcher, which may be taken-for-granted or less explicit in the reports for the A1, B1 or C1 rated researchers. Details about the reports selected for the analysis follow in section 3.2.2.

### **3.2.2 About the Reports Selected for Analysis**

Reviewer reports for eleven researchers awarded NRF ratings were selected: two in the A1 category, three in the B1 category, three in the C1 category and three in the Y1 category. In order to establish the linguistic features characteristic of each rating category, reports for three applicants in each category seemed an adequate amount of data. It is a representative enough sample (47 522 words) to allow a thorough and weighty analysis of the linguistic features of each rating category, but it is not unmanageably large. There are only reports for two reviewers awarded A1 ratings because reports for a third were unavailable. Because fewer than 10% of all researchers in South Africa hold NRF ratings, and fewer than 4% A ratings (A1 or A2) (NRF Evaluation and Rating Facts and Figures 2007), reports for A1 researchers are few even in the rating process, and so only two suites of reports for this analysis is representative of the applications processed by the NRF, even if it is inconsistent with the number of reports available for the other rating categories. As Table 3.1 shows, although the NRF aims to compile a suite of eight reports for each applicant, there is some variation, resulting from the number of suitable reviewers willing or able to supply reports for each applicant. Variation in the gradings assigned to the reports (with ‘1’ representing an excellent report, and ‘3’ an unsatisfactory report, not included in the final suite - see Appendix 7) is also evident. Even at a glance, the variation in the gradings assigned to the reports clearly varies significantly according to category, with the highest number of ‘1’-graded reports obtained for the A1 researchers, and the lowest for the C1 and Y1 researchers. Reports with gradings of 1/2 and 2/3 represent borderline cases between gradings of ‘1’ and ‘2’ and ‘2’ and ‘3’ respectively.

**Table 3.1 Number of Reports Collated for each Applicant and the Gradings Assigned to the Reports by the NRF**

Rated Researchers	NRF Rating awarded	Number of reports in suite	Grading of Reports				
			1	1/2	2	2/3	3
Applicant 12	A1	8	6	1			1
Applicant 100	A1	7	6		1		
Applicant 16	B1	8	5	2	1		
Applicant 22	B1	6	3		3		
Applicant 101	B1	8	4		4		
Applicant 3	C1	7	2	1	3	1	
Applicant 15	C1	5	1	3	1		
Applicant 102	C1	7	2	2	3		
Applicant 4	Y1	5		1	4		
Applicant 7	Y1	8	2	1	5		
Applicant 8	Y1	7	3	1	3		
<b>Totals</b>	<b>11 applicants</b>	<b>76 reports</b>	<b>34</b>	<b>12</b>	<b>28</b>	<b>1</b>	<b>1</b>

Details of the extent of the data can be found in Table 3.2 below. The average length of the reports provided for applicants in each rating category is provided, as well as the average length of the reports for each applicant. The total number of words for each suite of reports is indicated, together with the overall total of 47 522 words.

**Table 3.2 Average Length of Reports in each Suite and each Rating Category, and Total Number of Words Analysed**

Rated Researchers	Average length of reports in each suite	Average length of reports in each rating category	Total words analysed
Applicant 12	788 words	700 words	5515
Applicant 100	611 words		4276
Applicant 16	506 words	542 words	3995
Applicant 22	382 words		5912
Applicant 101	739 words		2293
Applicant 3	769 words	704 words	5385
Applicant 15	627 words		3313
Applicant 102	715 words		5002
Applicant 4	684 words	602 words	3420
Applicant 7	569 words		4549
Applicant 8	552 words		3862
<b>Totals</b>	631 words on average		

### **3.3 Justifying a Functional Approach to the Analysis, and the Choice of APPRAISAL**

The most appropriate perspective from which to analyse the reviewer reports is, as I have indicated at various points so far, that provided by Systemic Functional Linguistics. In what follows I provide a number of reasons for this choice, based on a congruity between the nature of SFG and APPRAISAL and the purposes of the reviewer reports and their role in the NRF Rating System. SFG and APPRAISAL, as indicated in Chapter 2, view language as functional, semiotic and dialogic and in the peer reviewer reports, these properties are fundamental in evaluating the applicant and instructing a rating.

Firstly, the notion of language as a social semiotic supports the role of the reports in construing a particular representation of the applicant, and it is this representation that determines the rating the applicant receives. Some members of the NRF Assessment Panel, responsible for allocating ratings based on the reports, have never met the applicant and are unfamiliar with his/her work and even field of research (for example, the Chair of the Assessment Panel and the Independent Assessor). All they know about the applicant therefore comes from the peer reviewer reports. The reports also only construe a very specific representation of the applicant: as a scientist, a teacher, a colleague, etc., in other words, as a member of a scientific community. It is important therefore to view the reports and the evaluations contained therein as construing the applicants from the subjective and stanced perspective of the reviewers. Correlation between the applicant construed by the reports and the 'ideal' applicant for each rating category (see Appendix 6) is an essential part of the rating process (see Research Question 2).

Secondly, the notion of language as 'dialogic' and encoding an interaction between writer and readers is in keeping with the reports as answering a call from the NRF for very specific information. The reviewers are, in effect, answering questions posed by the NRF regarding their knowledge of the applicants and their work. The reviewers need to establish their authority, and persuade the readers that they are reliable assessors of the applicant and are in a position to estimate where the applicant stands relative to his/her peers. APPRAISAL is particularly useful for uncovering the ways in which reviewers persuade their readers that their construal of the applicant is the most 'true' and that the NRF should consider it as such (see section 4.3.2.1). This is required for a better understanding of how the NRF Assessment Panel is directed to a certain rating allocation based on the reports (see Research Questions 1 and 2).

Thirdly, a functional approach allows a perspective on the scientific community as a discourse community, where the community is created, regulated and maintained through a set of discourse practices and conventions (see section 2.4). Scientific knowledge, which generally involves an abstract view of the world beyond our direct experience of it, requires interpretation, and status estimation to be performed through discourse. In addition, the community, which consists of individuals scattered all over the world, and not necessarily even speaking the same languages, is construed through discourse norms, taught in institutions, and maintained through the dissemination of scientific knowledge e.g. its use in publications, etc. A functional approach to the analysis takes into account the role of language in construing a world of science and community of scientists, as well as an individual applicant, thus providing a stronger sense of context, essential for understanding why language is used as it is. This approach also offers insights into the genesis of this type of discourse and why it conforms to the aims, values and requirements of science (see Research Question 4).

Fourthly, a functional approach is needed if we are to gain a better understanding of how the NRF rating system works, and its endeavour to make the rating of individual researchers valid, and consistent. The NRF Rating System compiles ‘evidence’ for the allocation of ratings in the form of ‘expert opinion’ (see section 1.4) which is considered the most valid form of evidence for the allocation of a rating. A functional analysis can make very explicit what this evidence consists of (e.g. types of evaluations), who the most appropriate ‘expert’ is, and how this plays a role both in legitimising the credibility of the rating system, and reaffirming the hierarchy and values in the scientific community (see Research Questions 3 and 4).

Finally, APPRAISAL Analysis offers the most thorough and comprehensive framework for exploring evaluation and instruction, the most dominant types of meanings expressed in the reports and the rating system as a whole. APPRAISAL explores a variety of evaluative meanings covering both personal qualities (Judgement), and entities (Appreciation), and how such evaluations can be intensified or made more or less exact (Graduation). It also offers means for tracing reader alignment: how readers are instructed to take a certain stance, and how writers and readers enter into a dialogue in order to negotiate a relationship of solidarity and alignment (Engagement). Politeness strategies contribute an additional dimension of meaning, linking certain linguistic formulations to interpersonal relationships construed in the text. In the following sections, I provide a detailed discussion of how I carried out the APPRAISAL Analysis

with the addition of politeness strategies, in order to answer the research questions referred to above.

### **3.4 Methods for Applying APPRAISAL Analysis**

#### **3.4.1 Introduction**

I attempted to apply the APPRAISAL Framework in the most detailed manner possible in order to obtain a thorough investigation of interpersonal meanings in the peer reviewer reports. The APPRAISAL Analysis was carried out in stages outlined briefly in this section and addressed in detail in sections 3.4.2-3.4.6. The first major stage was to identify the interpersonal meanings realised in the texts, and then tabulate these meanings as ‘instantiations’ of system choices under the APPRAISAL Framework, considering Attitude, Graduation, Engagement and politeness strategies separately (see Tables 6.23-6.66 in Appendices 19-29). The term ‘instantiation’ replaces ‘realisation’ at this stage of the analysis because “realisation formalises the **instantiation** of system in process” (Martin 1992: 5, author’s bold-type). Both structures and systems of meaning play a role at this stage, as the system choices, deriving from the discourse semantics rather than the lexico-grammar, allow for and accommodate cumulative prosodic meanings. The way in which I carried out this stage of the analysis is the focus of sections 3.4.2-3.4.6 below. The second major stage involved the synthesis of the separate tabular analyses (i.e. the ‘content’ plane of meaning) and their interpretation in the light of the ‘context’ plane of meaning i.e. the genre of situation and culture. This is reported on in the analysis in Chapter 4.

##### **3.4.1.1 Formatting Conventions**

Working with such a large body of data, consisting of a number of shorter texts (76 reports for 11 applicants, rated in 4 different categories) made it necessary to make certain formatting modifications to the reviewer reports in order to make them more conducive to tabular analysis, and the APPRAISAL instantiations more accessible to readers. Firstly, line numbers are given for each suite of reports, beginning at the start of the first report and running continuously through to the final report. All quotes from the reports are followed by both the Applicants’ number (see Tables 3.1 and 3.2 for the number assigned to each applicant) and the line number, so that they may be most easily located in their co-text in the reports and tabular analyses (Appendices 19-29). For example:

- *His publication output during the past 7 years has been [astounding](#) (12; 152),*  
can be found in the suite of reports for Applicant 12, line 152, and:

- *I do not know Prof\*\*\* personally* (16; 4),

can be found in line 4 in the suite of reports for Applicant 16.

Secondly, instantiations of Attitude are underlined, instantiations of Graduation are in **pale font**, and instantiations of Engagement are **shaded**. For example, in:

- *The group is not particularly large but it has capitalised extremely effectively* (3; 65);

*not particularly large* and *extremely* are instantiations of Graduation (mass, downscaled and upscaled process, respectively), **not...but** a type of Engagement (Counter), and *it has capitalised extremely effectively*, a type of Attitude (positive Tenacity). Quotes from the reports are always in *italics*, and generally in a smaller font-size.

In order to avoid over-crowding the reports with too many formatting variables, which could impede rather than facilitate attention to interpersonal meanings, I have not included format modifications for politeness strategies, different types of Attitude, Graduation or Engagement, double- or triple-coding, etc. However, these are made explicit whenever quotes are included for discussion. I believe that this achieves a level of detail optimally comprehensive for reading the reports and for discussing the various interpersonal meanings in more detail in the analysis section (Chapter 4).

### **3.4.2 Attitude**

#### **3.4.2.1 Identifying Instantiations of Attitude**

Because APPRAISAL is located at the level of discourse semantics, when identifying different types of Attitude, I focus primarily on Attitudinal meanings i.e. Affect, Judgement or Appreciation, rather than on specific grammatical structures. Although this requires more reliance on analyst/reader intuition, too much subjective variation when it comes to the categorisation of the various Attitudinal meanings under the APPRAISAL Framework is checked by following the guidelines provided by Martin (2000), Martin & Rose (2003/7) and Martin & White (2005) (see also section 2.3.2). This includes lists of lexical items (found in Sections 2.3.2.1 to 2.3.2.3) which ‘define’ the range of meanings, both positive and negative, that a certain Attitude category covers. It also includes the use of ‘frames’ (see section 2.3.2.4) to help distinguish different types of, say, Judgement from Appreciation. A variety of grammatical forms can be used to express Attitude, as indicated in the previous chapter, sections 2.3.2 to 2.3.4.

### 3.4.2.2 System Categorisation of Attitude Types

In order to capture as much information as possible about each instantiation of Attitude in the texts, in an arrangement as organised, concise and accessible as possible, I entered all this information into the tabular analyses in Tables 6.23-6.66 in Appendices 19-29. This method is based on similar tabular analyses used by Droga & Humphrey (2002), Martin (2000) and Martin & White (2005), but includes additional details i.e. whether an instantiation is inscribed, evoked or invoked, and where double- or triple-codings occur. I also developed the different tabular analyses for Attitude, Graduation (see section 3.4.3.2), Engagement (see section 3.4.4.2), and politeness strategies (see section 3.4.5.2) as a ‘set’, consistent in their presentation and the information they contain. The latter is of my own devising and is the only tabular analysis that displays the simultaneous instantiation of Attitude, Graduation and Engagement, and how they co-function to express politeness in the texts.

In Table 3.3 below, I provide a part-sample of one of the tabular analyses for instantiations of Attitude for the purpose of clarifying the kinds of information contained and explaining why this information is considered important for this initial stage of the analysis. The full tabular analysis can be found in Appendix 19, page 344).

**Table 3.3 Sample of system categorisation of Attitude for Applicant 12**

Applicant 12								
Line	Instantiation	Appraiser	AFFECT	JUDGEMENT	APPRECIATION	Positive /negative	Type	Appraised
<b>Report 1</b>	62 instantiations							
4	well known	Reviewer 1			Valuation	+	inscribed	App 12
4	eminent research scientist	Reviewer 1			Valuation	+	inscribed	App 12
6-7	I know the applicant personally	Reviewer 1		Soc Est- Capacity		+	evoked	Reviewer 1
8	always admired	Reviewer 1			Reaction	+	inscribed	App 12
9-10	broad and deep knowledge	Reviewer 1		Soc Est- Capacity		+	inscribed	App 12
9	scientific contributions	Reviewer 1			Valuation	+	evoked	App 12's work/research
9-10	leadership of a very productive group	Reviewer 1		Soc Est- Tenacity		+	inscribed	App 12
	(double coding)	Reviewer 1		Soc Est- Tenacity		+	invoked	App 12's group

Indicated in the top row is the Applicant number (12) and in the third, the report number (1) and the number of instantiations of Attitude (evaluations) in this particular report (62). The number of instantiations is included simply to assist with comparing the incidence of Attitude across the different rating categories (see Appendix 1, Table 6.3). In addition, we have:

- Line numbers: useful for locating the instantiation in the text, and for cross-reference to other kinds of APPRAISAL (i.e. Graduation and Engagement) and politeness strategies which often occur simultaneously.
- The instantiation identified and to be categorised: this makes the table comprehensive without constant recourse to the texts.
- The Appraiser: this corresponds to the authorial voice and is important to note when tracing reader alignment and positioning strategies, and interpreting the APPRAISAL Analysis in light of the context in which the texts were produced.
- Options for Affect, Judgement and Appreciation: the different types of Affect, Judgement and Appreciation are slotted under these columns, alongside the relevant instantiation. I chose to use a system of three separate columns rather than just one under which all Attitude types could be placed, so that the distribution and prevalence of Affect, Judgement and Appreciation is more visible.
- Whether the Attitude types have a positive (+) or negative (-) orientation.
- Type: whether the Attitude types are inscribed, evoked, or invoked.
- The Appraised: what is being evaluated is very useful to note, because it allows for a finer, more detailed distinction between instantiations of one type of Attitude (e.g. in Table 3.3, Valuation is used to assess both the applicant and his work), and also types of Attitude (inscribed, evoked, invoked) and whether they are positive or negative. This column of the table, in particular, provides the interpretive information backing up the system choices made.
- Double- and triple-codings can be recognised by shaded blocks under the ‘Instantiation’ column (can be seen for: *leadership of a very productive group* in lines 9-10 in Table 3.3).

I did not allow for more than three codings of a single instantiation i.e. although there are double- and triple-codings, there are no quadruple- or quintuple-codings. This is because although some blurring of categories can occur, and double/triple coding can allow for more nuance and attention to detail, at some point a line needs to be drawn because allowing the presence of too many categories can amount to breaking down the category boundaries altogether, thus defeating the object of having a framework that divides them in the first place. For example, Affect is considered the basis of all Attitude, and it makes sense that the expression of *any* positive evaluation would, at some level, mean a feeling of happiness, security or satisfaction, and a negative evaluation, unhappiness, insecurity or dissatisfaction

(see section 2.3.2.1). Allowing for multiple-codings without limits would require that *every* instantiation of Attitude be coded together with Affect. The result would be to lose nuance and the subtle distinctions between meanings provided by the APPRAISAL Framework. Exactly where I have drawn this line (i.e. allowing triple-codings but not quadruple-codings) is of course an individual and somewhat subjective decision, but I feel it is well justified and works for this analysis, and is not completely superficial, as it is based on similar principles to the boundaries between categories established by the APPRAISAL Framework. In my analysis, I had to make a number of decisions regarding the system categorisation of meanings that were problematic in terms of the Attitude categories to which they might belong. These are discussed in section 3.4.2.3 below. I also introduced certain measures to achieve a balance between my personal interpretation and the APPRAISAL Framework categories (see section below), and my reading position as an analyst, and the construed/actual readers of scientists and NRF assessors.

### **3.4.2.3 Managing Additional Complexities under Attitude**

Although the purpose of an SFL or APPRAISAL analysis is to make explicit exactly how we use language to construe meanings, categorising these meanings under the APPRAISAL Framework can present difficulties where these meanings are more embedded in the context than the lexico-grammar. Where I encountered such problems under Attitude, I have aimed for consistency, deciding on a category (or categories in the case of double- or triple-codings) for the meaning in question and assigning it uniformly (but not rigidly i.e. some flexibility and variation is permitted) throughout the reports. For example, *sophistication* of scientific techniques as positive Composition, *experience* and *expertise* as positive Capacity, and being *well known* or *famous* as positive Valuation. Some of the more complex meanings are managed through multiple coding. Some examples are provided below.

Evaluations concerning citation counts or where the reviewer claims to have cited the applicant's work (or not), for example:

- *I have cited [all the papers](#) (22; 83),*  
are categorised as evoked Reaction and Valuation, Reaction because the work must be interesting and appealing if it has been chosen over work produced by other researchers, and Valuation because if the work is being cited then it must be useful. Evaluations of an applicant's work in terms of its 'novelty' or 'uniqueness' I have categorised as inscribed Valuation (an evaluation of the work itself) and invoked Normality (although there is no direct

evaluation of the researcher producing the work, if it something new, then the researcher too is original or special in his or her own right). For example:

- *The diversity of the work is very unusual* (16; 10) (inscribed positive Valuation and invoked positive Normality),
- *...does not represent an innovative approach to the study of peptides* (8; 162) (inscribed negative Valuation and invoked negative Normality).

Evaluations that point out the worth of the applicant's work to society (or to industry if it is an industry that benefits society), I have categorised as invoked Propriety together with inscribed Valuation, for example:

- [the applicant's work]...will be of inestimable value in conserving endangered species (4; 202-203);
- numerous results were used to improve management options of nature conservation agencies (7; 327-328).

The reason for analysing the above evaluations in this way is based chiefly on one of the core values of research in South Africa: to advance the development of the country in terms of natural resource conservation, economic infrastructure and the wellbeing of society (see NRF mission statement, section 1.3.1). At many South African institutions, including The Academy of Science of South Africa, community service is a major feature of the institution's mission statement and a good researcher is expected to practice this as well as teach and engage in quality research. Evaluations of the applicant's students successful in their own careers, for example:

- \*\*\* has trained some superb PhD students and post-doctoral researchers. Many have gone on to senior positions at home and abroad (100; 30-31),

are double-coded as inscribed positive Valuation (an evaluation of the student) and invoked positive Capacity (an evaluation of the applicant, who must be a capable and competent teacher or supervisor to produce such successful students).

When assigning positive or negative orientations to instantiations of Attitude, I encountered some incongruence between meanings construed at the level of the discourse semantics, and how they are interpreted at a broader contextual level. Martin (2000: 156) associates positive Social Esteem with 'admiration', negative Social Esteem with 'criticism', positive Social Sanction with 'praise' and negative Social Sanction with 'condemnation'. However, in the reviewer reports where these kinds of meanings most certainly predominate, the association between positive and negative values under the APPRAISAL Framework and these interpersonal meanings (praise/admiration and criticism/condemnation) does not always hold. It is mainly under the Judgement categories, Normality and Capacity, that this incongruence is found. For example, we have instantiations of Normality such as:

- *Mole rats occur only in Africa and that gives the local scientist a huge advantage* (inscribed positive Normality) (101; 361-362);
- *While he has acclaim worldwide for his work (inscribed positive Reaction, evoked positive Valuation), it is an acclaim focussed on a model which is not naturally available outside Africa (evoked negative Normality, evoked negative Capacity) (101; 362-363).*

In the first example, the instantiation of positive Normality (huge advantage) does not appear to realise praise or admiration. It seems to suggest (especially with consideration to the following evaluation - the second example above) that much of the applicant's success is due to luck or fortune, rather than to his innovation or aptitude for producing quality research. This interpretation accounts for the evoked negative evaluations of Normality and Capacity that follow in the second example, suggesting that the applicant may not be as 'special' or 'capable' as he might appear. Similarly in the following example:

- *Dr\*\*\* was awarded her PhD only in 2000 (evoked negative Capacity)..., thus perhaps reducing the opportunity to be very productive (evoked negative Normality) (7; 218-220),*

the reviewer does not seem to be criticising the applicant for being a poor researcher but is instead pointing out the 'unfortunate' circumstances that make her 'incapable' of being as productive as one might expect. The result is that she cannot be criticised or condemned or held blameworthy. Evaluations of negative Capacity such as the one above, which do not function to criticise the appraised, occur more frequently and in a wider variety of contexts than those under Normality. For example, a reviewer claiming:

- *I have not been able to assess clearly the contribution of Dr\*\*\* to some of these papers (inscribed negative Capacity) (7; 226),*

is evaluating him/herself in terms of negative Capacity, but certainly not self-criticising. In fact, the above evaluation seems to hint that the reviewer's 'incapacity' is a result of some fault on the part of the applicant who, perhaps, did not provide enough detail in his/her application.

One also finds under Reaction instances of non-critical negative evaluations. The most obvious example is where I have analysed evaluations concerning *difficulty* as negative Reaction, for example:

- *The research work carried out by the applicant is technically very demanding (negative Reaction) and it is difficult (negative Reaction)... (4; 86).*

Here, the reviewer is pointing out a disadvantage of this particular area of research, but it does not follow that the reviewer dislikes or is uninspired by the field, or that he/she is suggesting that the applicant is uninteresting as a result of working in it. It is more likely that the reviewer admires the applicant for excelling in such a challenging field of research.

All the examples discussed above draw attention to the importance of taking the context (Genre and Register) in which the reports were produced into account at the tabular analysis stage. They also show that the APPRAISAL Framework, when applied consistently, carefully and sensitively, allowing for some flexibility of categories and their boundaries, and incorporating structured meanings as well as systematised ones, can indeed provide insights into specific discourse types, without involving too much or too little analyst or reader subjectivity.

### **3.4.3 Graduation**

#### **3.4.3.1 Identifying Instantiations of Graduation**

Instantiations of Graduation are generally more readily identifiable than Attitude (particularly implicit Attitude), as they function mostly to grade evaluative meanings rather than construe them anew. In the peer reviewer reports, which are so richly evaluative, Graduation occurs most often together with inscribed or invoked Attitudinal meanings, rather than propagating prosodies of evoked Attitude (see section 2.3.3.3). This means that the various degrees of meaning are more visible in the texts and identifying instantiations of Graduation is more straightforward. I have used the guidelines provided by Martin & White (2005) i.e. the lexical items representative of each Graduation category (these can be found in sections 2.3.3.1 and 2.3.3.2 in the previous chapter, together with examples from the reviewer reports) as the basis for identifying instantiations. A variety of linguistic forms can be used to graduate meanings, for example: isolated lexical items (*very good*), infused with an instantiation of Attitude, (*outstanding*), or figurative language (*he is a shining star*), etc. Included in section 3.4.3.2 is the design for the tabular analysis that aims to contain as much information as possible about each instantiation of Graduation in the reports, and the variety of grammatical forms they can take.

#### **3.4.3.2 System Categorisation of Graduation Types**

The tabular analysis for Graduation is based on Droga & Humphrey (2002) but, because I utilise a fuller version of Graduation (taken from Martin & White 2005) which includes a larger number of categories, I had to make space for additional details not included by Droga & Humphrey (2002): the type of Graduation (isolating, infusing, etc.) and the Attitudinal meaning it modifies. Table 3.4 is a part-sample of a tabular analysis for instantiations of Graduation for Applicant 100 (the full analysis can be found in Appendix 20, page 371).

**Table 3.4 Sample of System Categorisation of Graduation for Applicant 100**

Line	Instantiation	FORCE		FOCUS	Type	upscaled/ downscaled	Attitudinal meaning amplified		
		Quantification	Intensification	Sharpened/ softened			Positive/ negative		
<b>Report 2</b>	72 instantiations								
44	one of the	number			isolating	upscaled	+	Valuation	App 100
44	very top marine ecologists		quality		isolating	upscaled	+	Valuation	App 100
44	major asset	presence			isolating	upscaled	+	Valuation	App 100
45	fantastically		quality		infusing	upscaled	+	Reaction	App 100
47	one of the	number			infusing	upscaled	+	Capacity	Reviewer 2
47	top...ecologists	presence			isolating	upscaled	+	Capacity	Reviewer 2
47	excellent sense		quality		infusing	upscaled	+	Capacity	Reviewer 2
50	currently	Proximity-time			isolating	upscaled	+	Capacity	Reviewer 2
50	extended visit	Distribution-time			isolating	upscaled	+	Capacity	Reviewer 2

In the table above, we have, in the second row, the report number (2) and the number of instantiations of Graduation in that particular report (again, simply to assist with comparing Graduation across rating categories later on). The labels for the different columns, found in the top row, show that in the tabular analysis for Graduation, we have:

- Line numbers and the quoted instantiation.
- The ‘Appraiser’ and ‘Appraised’ are not included because the focus is on Graduated Attitudinal meanings (and not Engagement - see section 3.4.4.2) and this information is already in the tabular analysis for Attitude.
- Options for Force and Focus: Force has a number of sub-categories which are entered under sub-columns for Quantification and Intensification. Under Force, the options are for ‘softened’ or ‘sharpened’ meanings. As with the Attitude tabular analyses, multiple columns rather than a single one more effectively display the distribution and prevalence of the different types of Graduation. Note that I have considered ‘mass’ and ‘presence’ as separate categories under Quantification (see section 2.3.3.1).
- Type: whether the instantiation of Force is isolating, infusing or figurative.
- Upscaled/Downscaled: like ‘type’, this is relevant only for instantiations of Force (Focus involves meanings which are either more precise (sharpened), or less precise (softened)). Intensification and Quantification involves meanings that are more forceful (upscaled) or less forceful (downscaled)).
- Attitudinal Meaning Amplified: this is to show how Attitude and Graduation work together to construe evaluative meanings. Including this here saves the reader the

trouble of having to turn back to the Attitude tabular analysis to see instantiation overlaps. It also makes the interpretation of the distribution of Graduation types more explicitly grounded in the Attitude analysis and the flow of evaluative meanings through the reports.

Under Graduation, I have not included multiple-coding, primarily because I did not encounter any instances where it appeared necessary. This is not really surprising considering that, as I said at the beginning of this section, Graduation in the peer reviewer reports grades meanings rather than construes them in the absence of Attitude. Graduation does, however, play an important role in the expression of politeness, but this is generally achieved together with Engagement rather than Graduation alone (see Tables 2.4 and 2.5 for examples).

### 3.4.3.3 Managing Additional Complexities under Graduation

Because identifying instantiations of Graduation is a more straightforward process than that for Attitude, additional complexities are few. However, some complications arising from the categorisation of infused Graduation are discussed below.

Infused Graduations, where the cline of meaning is encoded within the instantiation of Attitude (for example *good* as the ‘un-graduated’ Attitudinal meaning and *excellent* as infused, upscaled Attitude) presents a potential problem. Firstly, it suggests a clear-cut distinction between un-graduated meanings and graduated ones. In practice, however, factors such as the effect of the co-text on the meanings construed, the reviewers’ individual styles of expression and the conventions defining this particular type of discourse can cause this boundary to shift or blur. For example: to say that an applicant is *a leader* might, if appearing in isolation, be analysed as infused Graduation (‘presence’). However, if a reviewer is discussing leaders in the field and then sets the applicant apart as *a world leader*, then it would appear that *leader* is the un-graduated meaning and *world leader* the graduated one. Evaluations concerning the journals in which the applicants have published can also be problematic in this respect. For example, publishing in international journals generally carries more prestige than publishing in local ones, suggesting that *international journals* could be Valuation upscaled in terms of ‘presence’. However, in reports for an A1 researcher where we have evaluations such as:

- *high-ranking international journals* (12; 48-49);
- *first class international journals* (12; 143),

I have counted only the first part of the evaluations as graduated. For an A1 researcher, publications in international journals ought to be taken for granted and it is the fact that the journals mentioned are *high-ranking* or *first class* that sets them apart from other international journal, thus making these the relevant Graduation markers. I have aimed to assign Graduation instantiations consistently in such cases, but allow for variation on the basis of the co-text. How the above examples are categorised under Graduation ultimately comes down to the reading position and interpretation of the analyst. Bednarek (n.d: 114, italics added), also noting such complications, suggests that “the analysis of infused Graduation *can only be* based on the analyst’s intuitive assumption as to the degree of intensity a particular lexical item conveys”. This shows that Graduation, like Attitude, does incorporate sensitivity to meanings only interpretable with reference to the co-text and the context.

### **3.4.4 Engagement**

#### **3.4.4.1 Identifying Instantiations of Engagement**

The peer reviewer reports are designed to foreground the personal opinions of the reviewers and so there is a strong presence of the authorial voice (the reviewers) in the form of heteroglossia. I used the categories for different types of Engagement outlined by White (2003) and Martin & White (2005) and the examples they provide (see sections 2.3.4.1 and 2.3.4.2) to distinguish between different types of Expansion and Contraction. Engagement is the part of the APPRAISAL Framework most explicitly concerned with ‘instruction’ in texts: how evaluative language presents stance and seeks to align readers with this or some other another stance. Aligning readers involves construing a naturalised reading position in the text to which actual readers are positioned to conform. The aim is to build solidarity with readers by anticipating and attending to their stance and reading position, thus making them more amenable to persuasion (see section 2.3.4.3). How I categorised instantiations of Engagement and entered them into a tabular analysis is addressed in the following section.

#### **3.4.4.2 System Categorisation of Engagement Types**

The tabular analysis I used for Engagement is, as with those for Attitude and Graduation, based on Droga & Humphrey (2002), but incorporates more detail, as it is part of a full APPRAISAL Analysis, not an isolated Engagement analysis. The additional information I chose to include in this tabular analysis is: the authorial voice present, and the Attitudinal meaning that is expanded or contracted. Part of a tabular analysis for Engagement instantiations for Applicant 16 is provided in Table 3.5 (see Appendix 21, page 418).

**Table 3.5 Sample of System Categorisation of Engagement for Applicant 16**

Line	Instantiation	Voice	Contraction		Expansion		Type	Attitudinal meaning expanded/contracted		
			Disclaim	Proclaim	Entertain	Attribute				
<b>Report 6</b>	13 instantiations									
196	He appears to attract	Reviewer 6			Entertain			+	Capacity	App 16
197	although...does not appear	Reviewer 6	Deny /Counter		Entertain			-	Reaction	App 16's postgrad prog
197	This may be	Reviewer 6			Entertain			-	Reaction	App 16's work/research
200	However, I believe	Reviewer 6	Counter	Pronounce			subjective	+	Reaction	App 16's work/research
200	generally	Reviewer 6			Entertain			+	Reaction	App 16's work/research
203	one of the	Reviewer 6			Entertain			+	Valuation	App 16
204	many conservationists believe	Reviewer 6				Acknowledge		-	Reaction	App 16's work/research

In the table above, the report number (6) is in the second row together with the number of heteroglossic instantiations found in the report. The labels for the various columns, found in the top row show:

- Line numbers and the quoted instantiations.
- Voice: this is referred to as the ‘Voice’ rather than the ‘Appraiser’ because the Appraiser (i.e. the reviewer) may choose to include alternative voices in the report (direct or reported speech, for example). It is also a more accurate term for Engagement which focuses on the ‘authorial voice’.
- Options for Contraction (Proclaimers and Disclaimers) and Expansion (Entertainment and Attribution).
- Type: this is for specifying types of Pronouncement i.e. subjective or objective which, in my analysis, I have distinguished from one another (see section 2.3.4.2).
- The Attitudinal meaning contracted or expanded: to avoid over-crowding the tabular analysis and because evaluation (Attitude) is the foundation of the reports, I do not include details of Graduations in the instantiations of Engagement.

In Table 3.5 there are some instantiations which have been assigned more than one Engagement type (see lines 197 and 200 above). This is not multiple-coding as such: Engagement categories often co-occur (for example Denial and Counters) but this is not the same as invoking meanings such as we find under Attitude. Instead, they signal shifts in the presentation of stance (particularly with Disclaimers) and are useful for tracing the pathway taken towards solidarity-building and alignment (see sections 4.3.2 and 4.3.3).

### 3.4.4.3 Managing Additional Complexities under Engagement

The main limitation of Engagement I have encountered is that when applying the full APPRAISAL Framework as I do in this research, even the simultaneous instantiation of Attitude and Graduation together with Engagement is insufficient for providing insights into why certain Engagement strategies are used in certain circumstances. In other words, Engagement completes the analysis of how evaluation and instruction are achieved but not why they are achieved in a particular way. For example, why is Expansion used when criticising the applicants or making some assertions? The APPRAISAL perspective is that they are specialised strategies for aligning readers, and the SFL perspective requires us to look to the context plane: register and genre for an explanation of how these strategies have developed and why (see section 2.4 on scientific discourse and the scientific community). What is lacking is a more formalised integration of these contextual factors and the interpersonal meanings uncovered by APPRAISAL. So, for example, when a reviewer, who probably is not lacking in certainty or conviction, makes an evaluation hedged and speculative, for example:

- *It seems* (Entertain) *quite likely* (Focus: softened) *that his outstanding productivity will continue well into the future* (102; 120-121),

our knowledge of the context (from work by Myers and Hyland, for example) tells us that this is a convention of scientific discourse, and my view is that the APPRAISAL Framework, and particularly Engagement, can play a more active role in linking the language to the context and bringing the interpretation of the analyst or reader and instantiations of APPRAISAL closer together. This is the rationale for including an analysis of politeness strategies which is discussed next.

## 3.4.5 Politeness Strategies

### 3.4.5.1 Identifying Instantiations of Politeness

I approached the identification of politeness instantiations in the same way as instantiations of APPRAISAL (in sections 3.4.2.1, 3.4.3.1 and 3.4.4.1) focussing primarily on meanings construed at the level of discourse semantics, rather than a specific set of lexico-grammatical features, or APPRAISAL categories. Because politeness strategies are essentially face-saving strategies (see section 2.4.4) what counts as politeness depends on what is considered to be face-threatening in a particular context or genre. Identification of politeness therefore necessarily requires identifying the ‘face’ potentially threatened (see section 3.4.3.2 to follow). The guidelines forming the basis for what I have identified as politeness come from work on politeness in conversation (Brown & Levinson 1978, 1987), work on interpersonal strategies in scientific

discourse (see the discussion of work by Myers, Hyland, etc., in section 2.4.3), but primarily, the work of Myers (1989) on solidarity and deference politeness in scientific discourse (see section 2.4.4). Tables 2.4 and 2.5 in Chapter 2, where I have drawn parallels between politeness and APPRAISAL, together with examples taken from the peer reviewer reports, were fundamental in informing the choices made for the system categorisation of different politeness strategies.

### 3.4.5.2 System Categorisation of Politeness Types

I designed an original tabular analysis for politeness strategies similar in format to those used for Attitude, Graduation and Engagement. It aims to include the information essential to understanding how politeness operates in the reports to protect the face of both the readers and the discourse community, and the corresponding APPRAISAL categories. One of the aims of entering politeness and APPRAISAL types alongside one another is to see if any patterns emerge that can support the notion of politeness as expressed through evaluative and instructive language analysable in terms of the APPRAISAL Framework (see Appendix 1, Tables 6.11 and 6.12 for the APPRAISAL categories most common for solidarity and deference politeness). Table 3.6 below is part of a tabular analysis for politeness strategies for Applicant 12. The full analysis can be found in Appendix 19, page 367.

**Table 3.6 Sample of System Categorisation of Politeness Strategies for Applicant 12**

Applicant 12								
Line	Instantiation	Voice	politeness strategy	face potentially threatened	Corresponding APPRAISAL Categories			Pragmatic strategy employed
					Attitude	Graduation	Engagement	
<b>Report 1</b>	6 Instantiations							
22	might think	Reviewer 1	negative/deference	younger scientists			Entertain/Acknowledge	speculation
33	obviously	Reviewer 1	positive/solidarity	scientific community/readers			Affirm	
36-38	important information...diagnostic information	Reviewer 1	negative/deference	society/other researchers	negative Tenacity	Force: distribution: time (upscaled)		agent deletion
42	to some extent must have been performed	Reviewer 1	negative/deference	App 12/readers		Focus: softened	Entertain	speculation
48	becomes obvious by just looking	Reviewer 1	positive/solidarity	scientific community/readers			Affirm/Pronounce (obj)	depersonalisation
52	To me this became very clear	Reviewer 1	negative/deference	readers			Pronounce (subj)	personalisation

Like the tabular analyses for Attitude, Graduation and Engagement, we have the applicant number (12) at the beginning of the first report, the report number (1), the number of

instantiations in the particular reports, line numbers for where the instantiations may be found in the report and the instantiations themselves. In addition we have:

- Voice: the presence of politeness strategies construes an audience potentially threatened by some of the evaluations made in the reports. Noting the ‘voice’ that takes on the responsibility for redressing these threats is useful for tracing the role of individual reviewers in construing the scientific discourse community and maintaining the discourse norms.
- Type of politeness strategy: The two options are ‘solidarity’ politeness which protects positive face, and ‘deference’ politeness which protects negative face (see section 2.4.4).
- The face potentially threatened (which the politeness strategy functions to protect): this is generally that of the readers (the NRF assessment panel, or other actual readers - could correspond to the ‘exoteric audience’) or the scientific community (other scientists, not expected to be actual readers - could correspond to the ‘esoteric audience’) (see section 2.4.5).
- The corresponding APPRAISAL categories: under the columns for Attitude, Graduation and Engagement, I entered *only* those APPRAISAL types which function to express politeness. For example, where a reviewer says:  
*Clear indications of his international stature and respect (double-coding: Reaction and Valuation) **can be seen** (objective Pronouncement) in... (102; 110-111),*  
it is the objective Pronouncement (indicated in bold) that is the strategy for showing deference to the readers, not the Attitudinal expression of Reaction and Valuation. The objective Pronouncement depersonalises the preceding evaluation, construing it as factual rather than the subjective opinion of the reviewer. For the readers the ‘fact’ may be less threatening and as a result more persuasive than an opinion, particularly in this example where the evaluation concerns status and standing within the community’s hierarchy. Combinations of different APPRAISAL systems can work together in expressing politeness (for example, lines 36-38 and 42 in Table 3.6).
- The pragmatic strategy employed: this column is simply to assist with the interpretation of the rest of the table. Information about the instantiations, for example that they function as hedges or de/personalisation, serves as a reminder of why certain politeness strategies are categorised as deference or solidarity, or protecting the face of the readers or scientific community, etc.

This tabular analysis is, I believe, adequately suited to this analysis: it assists in providing the information and perspective necessary for answering the research questions, and shows how combinations of APPRAISAL categories are instrumental in protecting the scientific community through politeness strategies. However, it is not exhaustive in its scope. Some of the limitations together with some of the problems I encountered when categorising instantiations are discussed in the following section.

### 3.4.5.3 Managing Additional Complexities

When identifying politeness strategies, I had to be careful to distinguish genuine uncertainty on the part of the reviewer from construed uncertainty operating as a deference politeness strategy. For example, if a reviewer says:

- *I am reasonably familiar with his work (double-coding: positive Capacity and Valuation, downscaled quality), although I cannot claim to have read half his papers (negative Capacity, Counter) (101; 260),*

the downscaling of quality and the Counter are clearly not politeness strategies but a way of making more accurate and precise the reviewer's familiarity with the applicant's work. On the other hand, later in the same report the reviewer says:

- *If a flaw is to be found (negative Valuation, Entertainment) in his formidable track record (positive Valuation, upscaled 'presence'), it is his apparent disinterest to view sociality within a broader context (negative Tenacity, upscaled Distribution: space, Entertainment) and to be apparently constrained in his thinking (negative Capacity, Entertainment)...(101; 288-289),*

the three instantiations of Entertainment are indeed politeness strategies. Hedging a criticism in this way i.e. presenting it as one of a variety of interpretations is a less threatening and more appropriate strategy for this type of discourse. It does not limit the reviewers to viewing the applicant only as 'disinterested' and 'constrained' but instead suggests them just as possibilities. Conforming to this norm of scientific discourse can have the effect of making the evaluation more persuasive, and is therefore an option preferable to a more certain or factual means of expression.

It is worth noting at this point that successful persuasion relies on building solidarity with readers, and this can be achieved through the use of deference politeness strategies as opposed to solidarity politeness strategies, suggesting that the terms 'deference' and 'solidarity' for different politeness types can be potentially misleading. I have placed 'positive' and 'negative' politeness alongside 'solidarity' and 'deference' respectively in the tabular analysis because the former might serve as a safeguard against misinterpretation of the meaning of the latter. Both solidarity and deference politeness are, in a way, solidarity mechanisms which aim to align

readers, the difference being that ‘solidarity politeness’ does this by highlighting the commonality and in-group membership between reviewers and readers, and ‘deference politeness’ does this by maintaining some distance in order to show professionalism and respect.

The first possible limitation of the tabular analysis for politeness is that while it shows the correlations between politeness and APPRAISAL, it does not show the range of grammatical resources available for the different types of politeness, although this is to an extent implicit in the APPRAISAL categories (see sections 2.3.2 to 2.3.4 for the variety of grammatical forms Attitude, Graduation and Engagement can take). Because this analysis is about interpersonal meanings rather than grammatical forms, I do not consider such a detailed correlation to be necessary for understanding politeness in the reports. However some generalisations concerning how certain APPRAISAL categories can simultaneously function as more than one politeness type can be made, and could require a more detailed, grammatical level of analysis (for example, subjective Pronouncement can be used for solidarity politeness when evaluations are made more personal so as to be inclusive, or for deference politeness when evaluations are made more personal so as to be more subjective - see Tables 2.4 and 2.5).

I also found that the APPRAISAL Framework does not cover every type of solidarity politeness outlined by Myers (1989). The inclusive ‘we’ for example, when standing alone and not as part of an Engagement strategy such as Entertainment or subjective Pronouncement, can function as solidarity politeness. For example:

- *If **we** extend the comparison...* (3; 37) (solidarity politeness strategy in bold).

Acknowledgement (used in the non-APPRAISAL sense of the word) of other researchers, by naming them or referring explicitly to their laboratories, research programmes, etc. can also be a form of solidarity politeness but, like the inclusive ‘we’, does not correspond to any APPRAISAL category. So in the following example:

- *Her work (**along with that of Duncan \*\*\***) has also overturned previous theories...* (double-coding: positive Normality and Valuation) (4; 84),

it is the explicit naming of *Duncan \*\*\** that constitutes the politeness strategy. Cases such as these two are in fact rare and do not present any problems for my analysis. However, they do show that the APPRAISAL Framework does have some limitations when it comes to identifying politeness. I nevertheless included such cases in the tabular analysis, but they are identified

only by 'inclusive we' or 'acknowledgement' under the 'pragmatic strategy employed' column and nothing under the Attitude, Graduation or Engagement columns.

The tabular analysis also limits the kinds of face-saving politeness strategies identified, by focussing primarily on: the readers (the NRF assessment panel or any other casual reader), the scientific community as a whole, and other researchers in the field as being those whose 'faces' are attended to in the reports. Only in rare cases do I identify the face threatened as belonging to the applicants themselves or the reviewers. There are a number of reasons why I have chosen to focus on the latter rather than the former participants' faces.

To begin with, in the reports, unlike other types of scientific discourse, evaluation is the norm. Although praising and criticising are inherently face-threatening, where they are a necessary part of the discourse, they may require few if any redressive politeness strategies. For example, a reviewer making a simple and straightforward assessment of the applicant's work as *good*, need not attempt to protect the negative face of the applicant (i.e. the possibility that the applicant might be embarrassed at receiving such a compliment or obliged to respond to it). This would be an inappropriate evaluation for, say, a research article, but not an assessment report. If anything, positive assessments are not face-threatening because they do not stir trouble that might result in the applicant receiving a lower rating than he or she might like. Where the reviewer criticises the applicant, either by hedging negative evaluations or downscaling positive evaluations, I interpret such strategies as attending to the negative face of the readers, rather than the positive face of the applicant (although undoubtedly a hedged criticism is less damaging to the positive face of the applicant than an un-hedged one). One reason for this is that the applicant is not expected to read the report and is not therefore construed as a reader or audience in the text. The face that requires immediate attention is therefore that of the readers and not the applicant being evaluated. Making evaluations appear less certain or factual I consider deference politeness because they do not constrain the readers to a single reading position or stance. An evaluation that is dialogically expansive and construed as the subjective opinion of the reviewer leaves open the possibility of alternative interpretations, thus allowing readers more freedom when it comes to taking a stance. Of course, the reviewers' aim when writing a report is not to allow readers simply to make up their own minds about the applicant. Instead, the reviewers aim to align their readers: position them in such a way that they are persuaded to adopt the reviewers' stance rather than any alternatives, and giving readers space for contestation can be useful in this regard. Because

reviewers generally make a concentrated effort to prove their credibility in the opening sections of the reports, hedging or making evaluations more expansive or ‘speculative’ is less an expression of uncertainty and more of a polite and less imposing way of steering readers towards the preferred stance i.e. that of the reviewer. This is a well-researched convention of scientific discourse (see section 2.4.3) and therefore makes it more likely that deference towards the readers is the primary politeness strategy employed rather than an attempt to protect the positive face of the applicant. I mentioned earlier that the applicants are not construed as potential readers of the reports. One might then ask why the reviewers sometimes provide advice to the applicants in the reports, and why, when all agree to allow feedback from their reports to be provided to the applicant, the face of the applicants is still not attended to by the use of politeness strategies. My response to this is that reviewers seem to leave it entirely up to the NRF to convey feedback that might be useful to the applicants: they address the NRF panel directly at times, but the applicant is always referred to in the third person. In addition, providing advice appears not to be simply a way of passing on useful information to the applicants, but rather a strategy for persuading readers that the reviewer is in a position to adjudge where the weaknesses in the applicant’s career, research plans, etc. are, and what improvements ought to be made (this is discussed in more detail in section 4.3.2). The result is not only to enhance the apparent credibility of the reviewer, but to convince the readers further that there is good reason for endorsing the reviewer’s stance.

The tabular analysis also does not reflect strategies which protect the positive or negative face of the reviewers themselves. I did not feel this was necessary because they are in fact implicit in all the politeness strategies that are included, and any self-evaluations under Attitude. Simply conforming to the norms of this kind of discourse protects the positive face of the reviewer by construing him/her as a member of the scientific community who practices the appropriate discourse norms. Although the very request for an assessment report could be threatening to the negative face of the reviewer, reviewers can (and often do) decline from providing reports at all. In addition, where reviewers feel that they do not have enough knowledge or information concerning an aspect of the applicant’s work, rather than feeling constrained to provide some kind of assessment anyway, they often admit to this as a reason for not providing assessments of these particular areas. It therefore seems that where the negative face of the reviewers is threatened, the most common strategy is to opt out of the FTA rather than redress it. For the reasons mentioned here, I did not consider omission of politeness strategies attending to the face of the reviewers to be in any way problematic for this analysis. The strategies most

relevant for understanding how readers are aligned, necessary for answering the research questions require attention only to the face of the readers and the scientific community.

### 3.4.5 In Defence of a Qualitative Approach

A full statistical analysis of the various APPRAISAL categories and politeness strategies is unfortunately beyond the scope of this research. Not only is the body of data very large (47 522 words), and involves reports for 11 applicants rated in 4 different categories, but, more importantly, the APPRAISAL Framework together with the analysis of politeness strategies involves a very intricate analysis of this data. Interpersonal meanings are analysed in terms of a number of aspects which correspond to the vast array of variables and options available under the analytical framework. Tables 3.7 and 3.8 provide some indication of the complexity of the analysis in terms of the categorisation of interpersonal meanings. Table 3.7 indicates the numbers of instantiations (interpersonal meanings entered into the tabular analysis for analysis) for each suite of reports, and the overall total for the complete corpus, coming to 8183 instantiations

**Table 3.7 Number of Instantiations of Attitude, Graduation, Engagement and Politeness Strategies in the Peer Reviewer Reports**

<b>Rated Researchers</b>	<b>NRF Rating Awarded</b>	<b>Number of Instantiations of ATTITUDE</b>	<b>Number of Instantiations of GRADUATION</b>	<b>Number of Instantiations of ENGAGEMENT</b>	<b>Number of Instantiations of POLITENESS STRATEGIES</b>
Applicant 12	A1	392	272	108	56
Applicant 100	A1	434	278	70	63
Applicant 16	B1	364	240	133	89
Applicant 22	B1	234	129	50	28
Applicant 101	B1	507	234	175	120
Applicant 3	C1	403	197	191	108
Applicant 15	C1	237	80	68	39
Applicant 102	C1	437	175	78	44
Applicant 4	Y1	288	121	102	86
Applicant 7	Y1	378	164	128	105
Applicant 8	Y1	377	156	130	115
<b>TOTALS</b>		<b>4051</b>	<b>2046</b>	<b>1233</b>	<b>853</b>
					<b>Full Total: 8183</b>

Table 3.8 below shows the range of variables a single instantiation of Attitude, Graduation, Engagement and politeness strategies can be subject to. An additional complication lies in the permissibility of only certain patterns or combinations of these variables, for example: an instantiation of Graduation cannot be both sharpened and softened (two possible variables in the overall analytical framework) but it could be simultaneously softened and dialogically expanded.

**Table 3.8 Variables for Instantiations of Attitude, Graduation, Engagement and Politeness Strategies**

<p><b>Variables under ATTITUDE</b></p>	<ul style="list-style-type: none"> <li>▪ <b>Affect:</b> Happiness, Security, Satisfaction;</li> <li>▪ <b>Judgement:</b> Normality, Capacity, Tenacity, Veracity, Propriety;</li> <li>▪ <b>Appreciation:</b> Reaction, Composition, Valuation;</li> <li>▪ The Appraiser;</li> <li>▪ The Appraised;</li> <li>▪ Positive or negative orientation;</li> <li>▪ <b>Type of instantiation:</b> inscribed, invoked, evoked;</li> <li>▪ <b>Coding:</b> single, double, or triple-coding.</li> </ul>
<p><b>Variables under GRADUATION</b></p>	<ul style="list-style-type: none"> <li>▪ <b>Force: Quantification:</b> number, mass, presence, Proximity (time), Proximity (space), Distribution (time), Distribution (space);</li> <li>▪ <b>Force: Intensification:</b> quality, process;</li> <li>▪ <b>Focus:</b> sharpened, softened;</li> <li>▪ <b>Type:</b> isolating, infusing, figurative;</li> <li>▪ Upscaling or downscaling of Force;</li> <li>▪ <b>Meaning amplified:</b> positive or negative orientation, Attitude type (see variable categories above) and Appraised.</li> </ul>
<p><b>Variables under ENGAGEMENT</b></p>	<ul style="list-style-type: none"> <li>▪ <b>Expansion:</b> Entertainment, Attribution (Acknowledgement or Distance);</li> <li>▪ <b>Contraction: Disclaim:</b> Deny, Counter;</li> <li>▪ <b>Contraction: Proclaim:</b> Concur (Affirm, Concede), Pronounce (subjective or objective), Endorse;</li> <li>▪ Authorial voice;</li> <li>▪ <b>Meaning expanded/contracted:</b> positive or negative orientation, Attitude type (see variable categories above) and Appraised.</li> </ul>
<p><b>Variables under POLITENESS STRATEGIES</b></p>	<ul style="list-style-type: none"> <li>▪ <b>Politeness Strategy:</b> positive/solidarity or negative/deference;</li> <li>▪ Authorial voice;</li> <li>▪ Face potentially threatened;</li> <li>▪ <b>Corresponding APPRAISAL categories:</b> includes variables from Attitude, Graduation and Engagement (see above);</li> <li>▪ Pragmatic strategy employed.</li> </ul>

<p><b>Other Possible Variables</b></p>	<ul style="list-style-type: none"> <li>▪ <b>Rating category:</b> A1, B1, C1 or Y1;</li> <li>▪ <b>The grading the report receives:</b> 1, 1/2, 2, 2/3;</li> <li>▪ Individual style of the reviewer, the nature of the personal/professional relationship between the reviewer and applicant, whether or not the reviewer speaks English as a first language, the field of research, etc.</li> <li>▪ The reading position and stance of the analyst, actual readers and construed readers.</li> </ul>
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Essentially, what the preceding tables show is that we have 8183 instantiations of interpersonal meanings which can differ from one another according to approximately 130 variables, some combinations of which are possible and others not. A full statistical analysis would therefore require a computational-based corpus approach in which the APPRAISAL and politeness tabular analyses are entered into a database. It would also require the development of statistical software capable of extracting patterns in the variation in instantiation of interpersonal meanings while remaining sensitive to factors such as the context in which they were produced, the reading position of the analyst or readers, the naturalised reading position, the role of prosodic meanings and culturally specific meanings, etc. This is a large task which, even now, is challenging linguists and computer scientists. Bloom, Garg & Argamon (2007) propose a computational system for showing how expressions of Attitude (a fraction of the analytical framework I employ) for ‘sentiment analysis’ which focuses on the role of evaluative language in expressing opinions in texts. Acknowledging the problem of incorporating the variety of dimensions of meaning (both contextual and co-textual) afforded by Attitude, they note the challenge of incorporating implied Attitude which is conditioned by prosodic meanings and reader position, and testing the accuracy of the system. While their system has interesting results and involves a concise representation of Attitude choices, it has yet to be made accessible and operable to discourse analysts without a background in advanced computer science and it has yet to move beyond Attitude to Graduation, Engagement and politeness strategies which are equally important for this research. Most importantly, such an approach would not be required or even be useful for answering any of the research questions posed for this research. One of the problems of a statistical analysis is that interpretation of the analysis might result on over-reliance on the quantitative aspect rather than individual interpretation. If we are to attain a better understanding of how the NRF rating system works and how scientists construe a community through a specific set of discourse practices, then it is essential that our gaze focuses on this individual interpretation which is more representative of how we understand, interpret and use interpersonal meanings. Until there is a computational method

capable of incorporating the multitude of intricacies; grammatical, semantic, co-textual and contextual that factor into the discourse, a qualitative, individual interpretation is the most reliable method available for understanding such discourse practices.

Because of the above reservations, the approach I take to this research is fundamentally a qualitative one. The closest I come to a quantitative approach can be found in Appendix 1, Tables 6.1-6.12, where I have taken a few broad sets of categories (listed below) from the tabular analyses and represented them in terms of their proportional distribution for the reports for each of the rating categories. These categories are:

- The different types of Attitude: Affect, Normality, Capacity, Tenacity, Reaction, Composition and Valuation (see Table 6.3);
- Various ways in which Attitude is expressed: positive or negative orientation, whether it is inscribed, invoked or evoked (Table 6.4), single-coding or multiple-coding, monoglossia or heteroglossia (Table 6.5);
- Different types of Graduation: Force and Focus, intensification and quantification (Table 6.6);
- Various ways in which Graduation can be expressed: infusing, isolating or figurative (Table 6.7);
- Different types of Engagement: Contraction and Expansion (Table 6.8), Disclaimers and Proclaimers and Entertainment and Attribution (Table 6.9);
- Different types of politeness: solidarity and deference (Table 6.10);
- The range of APPRAISAL types used to express negative/deference politeness (Table 5.11) and positive/solidarity politeness (6.12).

In addition, I have calculated for the reports for each rating category:

- The average length of the reports and the proportion (represented as a percentage) constituted by the opening paragraph of the reports in each rating category (Table 6.2);
- The average number of instantiations of Attitude, Graduation, Engagement and politeness in the reports for each rating category (Table 6.1).

Clearly some of these will be more useful than others, for example a comparison of the average length of the reports for each rating category is likely to be more telling than a comparison of the proportion of Veracity in the reports for each category. Some also need to be viewed with particular caution, the different types of Attitude, for example, because they do not further

specify who the appraised is, whether the evaluation is positive or negative, etc. and can therefore be potentially misleading if this lack of specificity is not taken into account. Nonetheless, I have found this modest quantitative approach useful for my analysis because it condenses a very large amount of information from the tabular analyses, making it more accessible and readily comparable. It can also show which types of APPRAISAL and politeness are preferred in this kind of discourse (for example, Appreciation is the most dominant type of Attitude whereas Affect is virtually absent - see Table 6.3) and does point to some significant differences in the way evaluative and instructive language is used in the reports for the four different rating categories (see section 4.3.2 in the following chapter).

### **3.5 Conclusion**

In this chapter, I have provided the details of how I undertook the analysis of the peer reviewer reports and how I organised the research methods around addressing the research questions, and adding to the literature discussed in Chapter 2. In section 3.2, I justified the choice of data (section 3.2.1) and provided the pertinent information about it i.e. the number of applicants and the number of reports provided for each, the field of research each is involved in, and the NRF ratings awarded (section 3.2.2). In section 3.3, I provided the justification for the choice of APPRAISAL and a functional approach, in terms of its suitability for understanding the role of evaluative language in the peer reviewer reports and the rating system as a whole. In section 3.4, I gave a detailed description of the methods I adopted for the analysis of the peer reviewer reports. I provided samples of the tabular analyses for Attitude, Graduation, Engagement and politeness strategies which provide the basis for the interpretive analysis found in the following chapter. The tabular analyses, together with the peer reviewer reports analysed can be found in Appendices 8-29. I also justified my choice of making this analysis a qualitative one, with a quantitative approach to the data kept to a minimum and used with due caution and reservation (section 3.4.5) I also discussed some of the challenges and difficulties I faced at this stage of the analysis and how I sought to overcome them, acknowledging some of the limitations that remain. The following chapter, Chapter 4, interprets the tabular analyses of the data in the light of the context and literature discussed in Chapters 1 and 2.

# **CHAPTER 4 RESEARCH FINDINGS AND DISCUSSION**

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## 4.1 Introduction

In this chapter, I present the results of my analysis (see Appendices 1-3 in this volume and 19-29 in Volume 2), and provide the information required for answering the research questions. In order to structure the account in an interpretative manner i.e. according to themes rather than rating categories, and in order to make the account economical, I include several summaries of my findings in Appendices 1-3 (Tables 6.1-6.22) in addition to the written account in this chapter. Appendix 1 (discussed in section 3.4.6) is a qualitative summary of the findings, Appendix 2 is a summary of the APPRAISAL Analysis (including politeness) and the role played by every APPRAISAL category in the reports, and Appendix 3 is a summary of the main features of the reports in each rating category. While this does result in some repetition, the focus of each summary is different. This allows for multiple perspectives on the data, rather like unravelling the strands of a thread and then re-grouping them in different combinations. Multiple perspectives on the analysis also reflect one of the basic principles of SFL i.e. that meaning in language can be viewed from several angles and at multiple levels of specificity. I consider this three-stranded approach to the analysis valuable for a thorough understanding of evaluative and instructive language in the reports, and their role in the rating process as a whole.

Sections 4.2 and 4.3 of this chapter are discussions of the role of evaluative and instructive language in the reviewer reports. In section 4.2, I provide an account of the evaluations that are common to all the applicants (section 4.2.2) followed by an account of the evaluations that are specific to applicants rated in the separate rating categories (sections 4.2.3.1-4.2.3.4). In section 4.3, I report on the ways in which reviewers instruct ratings. I focus firstly on the multiple roles the reviewers take on in order to be persuasive (section 4.3.2.1-4.3.2.3) and how these vary according to rating category (sections 4.3.3.1-4.3.3.4).

Finally, a small issue, but one worth noting: I frequently use expressions such as: ‘the A1 researcher/applicant’, ‘the A1 reviewer’ or ‘the A1 reports’ when, technically, it would be more accurate to say: ‘the researcher awarded an A1 rating’, ‘the reviewer for the applicant awarded an A1 rating’ and ‘a report that is part of a suite for an applicant awarded an A1 rating’ respectively. I chose to use the former expressions rather than the latter, clearly as a matter of ease. I mention this just to caution against the possible misunderstanding that there is anything inherently ‘A1’, ‘B1’, ‘C1’ or ‘Y1’ about any individual applicant, reviewer or report.

## **4.2 Evaluation in the Peer Reviewer Reports**

### **4.2.1 Introduction**

This section focuses on how the applicant is construed in the reports through evaluative language. Evaluation is undoubtedly instructive, in that it presents a particular representation of the applicant (which alone precludes alternative representations). However, the linguistic strategies and APPRAISAL types that are more explicitly instructive and dialogic are focussed on separately in section 4.3. Section 4.2.2 provides an analysis of what is common to all the reports, and section 4.2.3, what distinguishes the reports in each rating category, thus allowing for the allocation of separate rating categories.

### **4.2.2 Construing the ‘Good Scientist’ in the Peer Reviewer Reports**

Only a researcher of a certain calibre qualifies for a rating, and although the NRF specifies clearly the requirements of a researcher rated in the A1, B1 C1 and Y1 categories (see Appendix 6, also Appendix 2, Table 6.13), it suggests only indirectly (viz. what they would like the reviewers to comment on in their reports - see Appendix 5) the various attributes of what constitutes an ‘established researcher’, a ‘good scientist’ or a ‘leader’ in the field. This is probably because these concepts are taken for granted by the members of the community: it is something of an accepted ideal to which all researchers aspire. Bearing in mind that not only is scientific knowledge but also our understanding of the world construed through discourse, it follows that the ‘ideal scientific researcher’ is also construed in certain discourses of science. The peer reviewer reports are probably the type of scientific discourse that most explicitly articulates the general benchmark against which all scientists are measured, and to which rated scientists are expected to conform, to a greater or lesser extent. An APPRAISAL Analysis, particularly Attitude, is an extremely effective means of revealing what this benchmark is, as it distinguishes between a variety of different evaluation types, focussing on the qualities of both people and entities. In their assessment reports, the reviewers for all the applicants discuss in detail the strengths and the weaknesses of the applicant’s work, standing and career in general. It is worth examining what constitutes a ‘good scientist’ based on *all* the data (the reviewer reports for the applicants in all four rating categories), because it shows what is common to all the reports, thus allowing for a basic description of this type of discourse across the discipline of Animal and Veterinary Sciences. This is useful for providing insights into some of the conventions of scientific discourse and how it functions to construe the values of the scientific community. Variations in the discourse according to the reports for an individual scientist and rating category are discussed in the following section (section 4.2.3).

The attributes of a ‘good scientist’ that I discuss in this section are: the individual researcher must have produced a high quantity of excellent research that has an impact on the relevant field and adjacent fields and has the potential to contribute to industry or the well-being of society. The research must also be novel and stylistically elegant. The researcher must be well-known and well-respected amongst the local and international community of scientists and have an extensive network of research partnerships. Finally, the researcher must have the ability to lead a research team and supervise students, and must have outstanding personal qualities that make him/her a figurehead and source of inspiration in the field.

Firstly, the most basic requirement of any scientist is that he/she produces high quality research. For the research to be considered good, it needs to be original, employ rigorous and sophisticated methods, have a significant impact on the existing knowledge in the field and be of practical use (particularly for ethical concerns such as environmental conservation, the well-being of society and industrial infrastructure). Valuation, which constitutes nearly half of all instantiations of Attitude for all four rating categories is the Attitude type used to assess whether something is ‘good’ or ‘bad’ (in terms of quality), or whether it is useful or important. Upscaled Force, particularly ‘number’, ‘mass’ and intensified quality are also used to convey the magnitude of the evaluation, for example:

- The *outstanding quality* of field and laboratory research (inscribed positive Valuation, upscaled quality) (12; 47);
- The presentation on the anatomy of ostriches was *particularly helpful* (inscribed positive Valuation, upscaled quality) (102; 12-13).

The impact the work has had on the relevant field of knowledge or adjacent fields of knowledge can also be assessed in terms of positive Valuation and sometimes Distribution (space). Because no field of research exists as a discrete unit, but is inextricably interlinked with other areas of scientific knowledge and methods of investigation, wide-impact research substantiates the validity of the research as well as its usefulness. Where the impact is for social and environmental issues, an evaluation of positive Propriety is invoked, indicating the applicant’s concern with the ethical implications of his/her work, for example:

- *This represents an almost inestimable progress for the entire research field* (positive Valuation, upscaled presence and Distribution (space), also Endorsement) (12; 346-347);
- [The research has] *broad implications stretching far beyond the narrow thermoregulation field* (positive Valuation, upscaled Distribution (space)) (12; 296-297);

- *The applicant's career has focused on providing population genetic data with practical implications for improved management of threatened taxa, ... a very worthwhile endeavour with significant value to society (Double-coding: inscribed positive Valuation, invoked positive Propriety, upscaled quality and presence) (7; 264-266).*

Although the primary focus of the NRF rating system is on research excellence, the ethical and practical implications of science is becoming increasingly important as it is more likely to attract funding. This means that one also finds accompanying evaluations of positive Reaction concerning this aspect of an applicant's work, for example:

- *The field of conservation genetics is a rapidly growing one, as more and more countries devote resources to more effective management of endangered species (positive Reaction, upscaled process, number and quality). The desire on the part of many academic scientists [is] to contribute something with social value (Triple-coding: inscribed positive Reaction and Valuation, invoked positive Propriety, upscaled number) (7; 278-280).*

When assessing the quality of the applicant's work, reviewers draw attention to the originality of the research, which involves an evaluation of positive Valuation of the work, invoking an evaluation of the applicant in terms of Normality. Exceptionally novel work that advances and develops the field requires an exceptional individual to carry it out, hence the double-coding of such evaluations, for example:

- *The large-scale work on South Africa's ecosystems has been extremely novel (Double-coding: inscribed positive Valuation, invoked positive Normality, upscaled quality) (100; 17);*
- *[The] unique long-term studies ...are not investigated anywhere else in the world (Double-coding: inscribed positive Valuation, invoked positive Normality, upscaled Distribution (time)).*

In addition, the research needs to be elegant and the methods employed rigorous, convincing, and innovative. A variety of APPRAISAL types can be used to assess the methods in the applicant's research, the most frequent one being Composition. Composition may sometimes also involve double-coding, with Valuation, for example, if there is also an explicit evaluation of the quality of the work, Tenacity, should an evaluation of the applicant him/herself be simultaneously invoked, or Normality, should the methods be original, for example:

- *...a well-balanced longitudinal mechanistic approach (inscribed positive Composition) (12; 69-70);*
- *The strength of this multi-faceted approach is that it has led to an integrated understanding of... (Double-coding: inscribed positive Composition and Valuation) (101; 133-134);*
- *His meticulous attention to detail... (Double-coding: inscribed positive Composition, invoked positive Tenacity, upscaled process) (101; 237-238);*
- *Dr. \*\*\*'s approach of using advanced methodology (positive Composition) to measure physiology 'in the wild' is certainly at the cutting edge of it (Double-coding: inscribed positive Valuation, invoked positive Normality, also upscaled quality and Affirmation) (12; 412-413).*

The applicant's work, in order to have a significant impact on the field, and to be accepted into the existing body of scientific knowledge, needs to be published or disseminated in the 'right' places. The applicant needs to publish his/her work mostly in high-ranking, high-impact international journals, but also in a variety of local journals, or those which transmit the research to those most likely to benefit from it. The journals in which the applicant publishes are evaluated in terms of positive Valuation, sometimes together with upscaled Force, for example:

- *Prof. \*\*\* is publishing in journals that highlight his work to scholars and members of industry and government in South Africa* (Double-coding: positive Valuation and Normality) and *he is also placing his work in a more general context* (positive Tenacity, softened Focus) and *reaching an international audience* (positive Tenacity, upscaled Distribution (space) in *top journals* (positive Valuation) (22; 96-98);
- *Most of Prof. \*\*\*'s work is published in peer-reviewed journals including prestigious journals* (positive Valuation, upscaled presence)... *providing unequivocal evidence* (positive Valuation, sharpened Focus, Endorsement) of the *importance and excellence* (positive Valuation, upscaled quality) of his work (12; 83-85);
- *Whilst many researchers may publish in good journals* (Double-coding: positive Valuation, invoked positive Normality, upscaled number) *within their field, few manage to publish in the range of journals* (downscaled number, positive Normality) [that the applicant does] (101; 193-194).

The applicant also needs to have presented his/her work at international conferences and meetings, and had contact with some of the top researchers in the field. Discussions of this aspect of the applicant's career generally involves multiple coding that simultaneously evaluates the applicant's personal attributes (often Tenacity or Normality), the value of the applicant's work (Valuation) and the community's positive estimation of it (Reaction). Attitude is often evoked, as although there may be no explicitly evaluative language, the value of sharing one's work with the community is to be interpreted positively. In addition, one is likely to find upscaled Force, particularly 'number', 'extent' and intensified quality, for example:

- *\*\*\*\* has spoken often at UK, European and international radiology conferences* (Double-coding: evoked positive Tenacity and Valuation, upscaled Distribution (time)) (102; 302-303);
- *...acted much like a "scientific ambassador" for her country*, (Double-coding: inscribed positive Valuation, invoked positive Reaction, sharpened Focus) *often being the only representative of the entire African continent* (evoked positive Normality, upscaled Distribution (space)) (8; 48-49);
- *She attends a remarkable* (positive Valuation, upscaled quality) *variety and number of conferences* (evoked positive Valuation, upscaled number), and *this augers well* (positive Valuation)... *she has collaborated with several groups in Europe* (Germany, France, Hungary and Israel) (evoked positive Tenacity). *Once again, entirely laudable* (inscribed positive Reaction, sharpened Focus) (8; 128-132).

Indications of the extent to which the applicant's research has been accepted into the existing body of scientific knowledge by the scientific community, are the citation counts the publications have received and familiarity other researchers in the field (including the reviewers themselves) have of it. Discussions of citation counts involve double-coded evaluations of evoked Reaction and Valuation: for the work to be widely cited, it must be both useful and interesting to those who cite it, for example:

- *\*\*\*'s work is as cited as any except the very few top marine scientists in the world* (Double-coding: evoked positive Reaction and Valuation, upscaled process and quality and sharpened Focus) (100; 124);
- *I frequently cite \*\*\*'s work in my own research papers and reports* (Double-coding: evoked positive Reaction and Valuation, upscaled Distribution (time)) (100; 254-255);
- *Everyone who is working in this or a related research area will know him* (positive Valuation of the applicant) *from conferences and especially from his tremendous amount of first-class publications* (positive valuation of the applicant's work, upscaled mass and quality) (12; 313-315).

Invitations to present research findings at conferences, or to contribute papers to journals involves multiple coded evaluations of Reaction (towards the applicant and his/her work), Valuation (the value of the work) and Social Esteem: either Capacity or Tenacity, depending on whether the applicant is construed as being 'capable' or 'dependable' enough to carry out the request. To receive such invitations is an honour for a researcher as it shows not only the interest and acceptance of the applicant's research by the community, but also its support for the research's continued development, for example:

- *As another indication of his prominence in his field, (positive Valuation, objective Pronouncement) he is invited, frequently, to address major international congresses and national meetings in other countries* (Triple-coding: inscribed positive Tenacity and Valuation, invoked positive Reaction, upscaled Distribution (time)) (102; 114-115);
- *...the invitations he has received to speak at international conferences, (Triple-coding: inscribed positive Tenacity and Valuation, invoked positive Reaction) requests to co-author important and popular textbooks* (Triple-coding: inscribed positive Capacity and Valuation, invoked positive Reaction) (102; 378-380).

In more general discussions of the respect the community has for the applicant, and his/her acceptance as a leading scientist, one finds multiple-coded evaluations of Reaction, Valuation, and sometimes Social Esteem, and often upscaled 'presence' or Distribution (space), for example:

- *He commands the respect of physiologists all over the world* (Double-coding: inscribed positive Tenacity, invoked positive Reaction, upscaled process and Distribution (space)) (12; 235-236);
- *I consider it a privilege to have been asked by the National Research Foundation to evaluate a marine scientist* (positive Reaction) *so hugely respected nationally and internationally as \*\*\** (Double-coding: inscribed positive Reaction and Valuation, upscaled process) (100; 106-107).

Similar types of evaluations are found in discussions concerning the applicant's standing relative to his/her peers; perhaps the most important indicator for the NRF of which is the appropriate rating category for a particular researcher. Any scientist worthy of an NRF rating will be placed by the reviewers in the upper order, if not at the very top of his/her field of research. In addition to positive evaluations of Reaction and Valuation and upscaled 'presence', one also sometimes finds negative evaluations of other researchers (not quite at the applicant's level), in order to draw a comparison between the 'good' and 'average' scientists in the field, for example:

- *He is the best (positive Valuation, upscaled quality) and most renowned marine scientist in South Africa, (positive Valuation, upscaled quality) in my opinion, (subjective Pronouncement) and among a small elite of five or so of the very top marine ecologists in the world (positive Valuation, upscaled 'presence') (100; 95-97);*
- *Others to whom he may be compared (Entertainment) include xxx (largely now involved in the policy aspects of marine conservation), xxx (focusing on human impacts without as much basic science), xxx (not nearly as strong (negative Capacity, downscaled quality) in basic ecology), and xxx (a superb leader in conceptual ecology but not involved in conservation applications) (positive Tenacity, upscaled quality, Counter, negative Capacity)...He is clearly the most recognizable and important figure in marine ecology in South Africa and the continent of Africa (positive Reaction and Valuation, upscaled quality, Affirmation) (100; 190-196).*

In addition to being recognised by the community for exceptional and prolific research, a good scientist must have certain attributes recognised as necessary for success in the field. Reviewers frequently assess the natural talent and competence of the applicants and their experience and expertise in the given field of research, and this can be seen in evaluations of positive Capacity, for example:

- *With age comes wisdom and experience and he has both in abundance (positive Capacity, upscaled quality and mass) (100; 279);*
- *He has a keen intellect (positive Capacity) (101; 228-229);*
- *He is as much at home in calculating the theoretical values of...as he is in applying his considerable expertise (positive Capacity, upscaled presence) (12; 164-166).*

A good scientist must also be highly productive, and maintain a steady output of publications. Positive Tenacity, often together with upscaled 'quality' or 'process' is the APPRAISAL type for such evaluations, as it draws attention to the perseverance and persistence required for such accomplishments, for example:

- *I have always admired (positive Reaction, upscaled Distribution (time)) the fact that Professor \*\*\* and his group have managed to maintain such a high degree of activity (positive Tenacity, upscaled quality) (12; 240-242);*

- *His past few years have been characterised by no slowing down of effort or impact: quite the opposite (Deny/Counter, positive Tenacity) as \*\*\*\*\* has been even more productive (positive Tenacity, upscaled process) (100; 164-165).*

A very important characteristic of a good scientist, particularly one working in Animal and Veterinary Sciences, is that he/she is able to work both independently and as a part of a team. Research in Animal and Veterinary Sciences generally involves groups of researchers working together on large-scale projects. The groups consist of researchers ranging from post-graduate students to the team leaders and project initiators. They are designed to combine the unique skills and expertise of the established researchers in order to build a highly productive and influential research group, whilst at the same time providing a supportive base for younger researchers working towards becoming recognised in their own right. The top scientists are those that lead such teams or bring something valuable and unique to the research conducted. They are also involved in teaching, supervising and mentoring activities, thus protecting and nurturing the group as a whole, not only their own careers and successes. Evaluations of the applicant's position as an individual researcher, contributing to the work of a team, involve Valuation (an assessment of the work produced and the value of the applicant) and Social Esteem, particularly Capacity and Tenacity, for example:

- *He has been very successful (positive Valuation, upscaled quality) in...keeping his team active and productive (Double-coding: positive Tenacity of the applicant and the group) (12; 92-92);*
- *In addition to his own high personal standing (positive Valuation, upscaled presence), he has organized and maintained a superb, internationally recognized group (Double-coding: inscribed positive Valuation of the group, invoked positive Tenacity of the applicant, upscaled quality and Proximity (space)) (12; 304-305).*

The success of those trained or supervised by the applicant reflects well on the applicant as it points to his/her competence as a teacher and one involved in expanding access to the scientific community. Multiple-coded evaluations that simultaneously praise both the applicant and his/her students are found frequently in discussions of the applicant's teaching record, for example:

- *He clearly has a knack for attracting good students (Double-coding: inscribed positive Capacity of the applicant and Valuation of the students, upscaled quality, and Affirmation) and getting them to perform at a high standard (Double-coding: inscribed positive Capacity and Valuation, upscaled quality) (100; 82-83);*
- *\*\*\*\*\* has produced a remarkable number (Double-coding: inscribed positive Reaction, invoked positive Tenacity, upscaled number) of very talented PhD's and Master's students (Double-coding: positive Valuation of the students, invoked positive Capacity of the applicant, upscaled quality) (100; 224);*
- *It is notable (positive Reaction) that during his career, Prof \*\*\* was very influential (positive Valuation, upscaled quality) on his group, many of those who belonged to his group are now successful in their own*

careers (Double-coding: inscribed positive Valuation, invoked positive Capacity of the applicant, upscaled number) (12; 86-87).

Clearly, in order to achieve all the accomplishments mentioned so far, a good scientist must have outstanding personal qualities such as: leadership abilities, the ability to inspire others, team spirit, enthusiasm for his/her field of research, humility, integrity, and a commitment to the scientific community, the general well being of society and the natural environment. A variety of Attitude types are used for evaluations such as these: mostly Valuation, Reaction and Social Esteem. For example:

- [he is] *a person with excellent leadership qualities* (positive Tenacity, upscaled quality). *In reading the material available to me one has a clear impression* (positive Reaction, subjective Pronouncement) *of a research group with an excellent team spirit* (positive Reaction, upscaled quality). *This is also mirrored* (objective Pronouncement) *by the enthusiasm* (positive Reaction) *that the team members have* (12; 218-221);
- *When combined, the facts speak clearly of a dedicated, motivated scientist* (positive Tenacity, objective Pronouncement) (4; 35);
- *Dr\*\*\* has earned my deep respect* (positive Reaction, upscaled presence) *as a referee of encyclopaedic knowledge and high integrity* (positive Propriety, upscaled quality) (12; 277-278);
- *I am always impressed* (positive Reaction, upscaled Distribution (time)) *by his personal force* (positive Tenacity) *and charisma* (positive Normality). *He is a charming individual* (positive Reaction, upscaled quality), *obviously* (Affirmation) *highly intelligent* (positive Capacity, upscaled quality), *but also very approachable* (positive Reaction, upscaled quality). *Despite an enormous workload* (negative Capacity), *he is kind and generous with his time and resources* (positive Propriety), *and I suspect* (Entertainment) *that his personality is a major source of his great success* (positive Valuation upscaled presence) (100; 89-92).

Although all the reviewers in the reports I analysed for this research appear to be in agreement concerning what it is that is required of a good scientist, there is often (and inevitably) disagreement concerning the extent to which an individual researcher fulfils these criteria, in his/her own right and relative to others in the field. Of course a researcher has to be 'good' in order to be rated at all, but it is only the researchers in the very top rating category (A1) that are construed as 'perfect', strongly demonstrating all the criteria mentioned in this section, according to the reviewers. In the reports for the B1, C1 and Y1 categories, some reviewers construe the applicant as being slightly weak in areas, and it is evaluations such as these which further stratify all these 'good' scientists, drawing a distinction between those in the top sector of the community and those at the very top, leading the development of the field. In the following section, I outline the differences between how the applicants in the different rating categories are construed in the reports.

### 4.2.3 Construing Individual, Rated Scientists in the Peer Reviewer Reports

In this section, I focus on the reports for the A1, B1, C1 and Y1 rating categories separately and, briefly, draw attention to those aspects of the reports which distinguish the researchers. It is not possible (or even necessary) to provide an exhaustive analysis of the reports for each rating category in order to identify what distinguishes them, and so the analyses that follow in sections 4.2.3.1 to 4.2.3.4 focus mainly on how similar or dissimilar the applicant is to the ideal scientist described in the previous section (4.2.2), and to the applicants in the other rating categories, as construed by the reviewers. A detailed summary of the role of all the APPRAISAL and politeness types in the A1 reports can be found in Appendix 2, Tables 6.13 to 6.17. A simplified summary focussing on the overall features of the reports, with less emphasis on the complex interplay of system categories can be found in Appendix 3, Table 6.19.

#### 4.2.3.1 Construing the A1 Rated Researcher

The A1 researcher is the ‘perfect scientist’ embodying all the qualities outlined in the previous section at an exceptionally high level. Indeed, many of the examples provided in the previous section come from the reports for Applicant 12 and Applicant 100, both rated in the A1 category. In this section, I will provide a brief description of the evaluations used in the reports for the A1 researchers that are found rather less frequently in the reports for the B1, C1 and Y1 researchers.

Probably the most significant feature of the A1 reports is that in the full suite of reports, there are no criticisms of the applicant or his/her work whatsoever. In addition, there are significantly more instantiations of Graduation per report on average (38 instantiations), in the A1 reports compared to the other rating categories (see Appendix 1, Table 6.1) and the majority of these (approximately 90%, see Appendix 1, Tables 6.6 and 6.7) are upscaled Force. A suite of reports for an A1 researcher is therefore most apparent by the extremely high esteem in which the reviewers hold the applicant. Evaluations such as those which follow, are found frequently in the A1 report but are far less common and sometimes even absent in the reports for the other rating categories:

- *He is famous (positive Valuation, upscaled quality) not only for the research that he initiated and directed, (positive Tenacity) but, possibly (Entertainment) more importantly, for the confidence he has instilled over the years in his students and collaborators, (Double-coding: inscribed positive Reaction, invoked positive Capacity of the applicant) whom he has inspired to become world-class scientists in their own right (Double-coding: inscribed positive Reaction, invoked positive Capacity of the applicant, upscaled presence). His enthusiasm is*

*infectious*, (positive Reaction) and his *critical approach to science* (positive Capacity) is *thought-provoking and always exciting* (positive Reaction, upscaled Distribution (time)) (12; 157-161);

- *I rate \*\*\* as the most outstanding researcher in his field of coastal marine ecology and conservation in the world* (positive Valuation, upscaled presence, also subjective Pronouncement) (100; 187-188);
- *Especially the sophisticated* (positive Composition) and *unique long-term studies* (Double-coding: positive Valuation and Normality, upscaled Distribution (time))... *are not investigated anywhere else in the world* (Double-coding: positive Valuation and Normality) *at such a high level of expertise in any sense* (positive Capacity, upscaled quality, Endorsement) (12; 55-57).

A slightly wider range of Attitude types is used in the A1 reports compared to the reports for the other rating categories (see Appendix 1, Table 6.3), and the A1 reports have the second highest (after the C1 reports) number of instantiations of Attitude per report on average. This, together with the fact that all evaluations of the applicant and his/her work are positive, and that upscaled Graduation is so prevalent, makes the A1 reports the richest and most varied reports overall when it comes to the positive evaluation of the applicant. For example, in the C1 and Y1 reports, the role of Composition is often to comment (and criticise) of the application submitted to the NRF by the applicant:

- *From the material at hand, I have no idea at all what Dr\*\*\*'s grant record is like* (Double-coding: inscribed negative Composition, invoked negative Valuation, sharpened Focus, subjective Pronouncement) (4; 144).

In the A1 reports, however, Composition is used to highlight the coherence in the applicant's research, for example:

- *I am particularly impressed* (positive Reaction, upscaled quality) with the *general thoroughness of experimental design, irrespective of the topic in question. The problem at hand is always clearly presented...and the presentation of data is clear* (positive Composition, upscaled Distribution (space/time)) (12; 208-210).

Composition does not comprise a substantial proportion of Attitude overall in the reports for any of the rating categories (between 1% and 3% - see Appendix 1, Table 6.3), but where it does occur, it can usefully distinguish between the top researchers, and those at a lower level.

The A1 rated researcher is construed as a 'figurehead' at the very top of his/her field. Sometimes this is stated explicitly, for example:

- *He is a giant* (positive Valuation, upscaled figurative presence) (12; 156);
- *Prof\*\*\* belongs to the absolute top relative to the peers in the field* (positive Valuation, upscaled presence) (12; 363-364);
- *I cannot do justice to a lion of marine science in 800 words, though I have tried hard!* (Double-coding: negative Capacity of the reviewer, invoked positive Valuation of the applicant, upscaled, figurative presence) (100; 110-111).

It is unsurprising, considering the examples above, that ‘presence’ and figurative Graduation are more common in the A1 reports than they are in the reports for any of the other rating categories. Sometimes the applicant’s eminence is construed less directly, for example by evaluating the applicant’s work or other aspects of his/her career:

- *You are lucky to have such an outstanding scientist* (Double-coding: positive Normality and Valuation, upscaled quality) (100; 99-100);
- *My guess is that an editor who receives a paper from \*\*\* rubs his hands in glee!* (Double-coding: inscribed positive Reaction, invoked positive Valuation, subjective Pronouncement) (100; 150-151);
- *He has been able to debunk a great many myths* (Double-coding: inscribed positive Capacity, invoked positive Valuation, upscaled number, Endorsement) *that have arisen from the study of caged or otherwise restricted animals, and he has therefore totally revised the world's thinking about thermoregulation in mammals* (Double-coding: evoked positive Tenacity and Normality, upscaled process, Endorsement) (12; 111-113).

One would expect it to take more than seven years (the NRF rating period) to reach the level of an A1 rated researcher and so although the rating is based primarily on research outputs from the past seven years, it is senior researchers with long careers behind them or even previous NRF ratings who tend to be the most competitive candidates for the top rating category. This is certainly true for the researchers whose reports I have analysed. To produce seven years’ work worthy of A1 rating requires, it would appear, a wealth of experience in the field as well as the accumulation of resources and international networks, which a senior researcher is more likely to have than a junior researcher. An A1 rating therefore represents the pinnacle of a researcher’s career: international respect and recognition and a high-impact output, against which other researchers can measure their work and standing. For example:

- *He is currently at the peak* (positive Tenacity) *of a fantastically* (positive Reaction, upscaled quality) *successful and productive career* (Double-coding: positive Tenacity and Valuation) (100; 45-46);
- *I have previously assessed \*\*\* for FRD on several occasions* (positive Capacity of the reviewer, upscaled number) (100; 8-9);
- *...the quality of the candidate’s research during the last 7 years continues to echo that of previous years and must be seen as being very high* (positive Valuation, objective Pronouncement, upscaled quality) (12; 201-202).

The applicant is also likely to be the leader of the research team, involved in the organisation of the group projects and supervision of junior researchers. For example:

- *He has organized and maintained a superb, internationally recognized group* (Double-coding: inscribed positive Valuation of the group, invoked positive Tenacity of the applicant, upscaled quality and Proximity (space)) (12; 304-305).

Finally, one is more likely to find additional evaluations in the A1 reports, not necessarily required, but provided by the reviewers anyway, because of their respect for the applicant and enthusiasm for the applicant's work, for example:

- *I am particularly impressed (positive Reaction, upscaled quality) by the fact that Professor \*\*\* rarely is cited as first authors (once in 40 papers since 1999) (Double-coding: evoked Propriety and Valuation, Endorsement, downscaling of Distribution (time))... Reserving the place of honour for graduate students and co-workers is a commendable attribute (Double-coding: inscribed Propriety and Valuation) (12; 253-257);*
- *The scientific community will be very pleased to learn (positive Reaction, upscaled quality) that Professor\*\*\* plans to continue his research activities (positive Tenacity) over the next five years at least, in spite of leaving his post as the Professor of Physiology (12; 358-360);*
- *Most people interested in the sea have copies of his books in their bookshelves, myself included (positive Valuation) (100; 152-153).*

It is clear that construing an A1 rated researcher is straightforward: there are no criticisms and no contention amongst reviewers concerning the standing of the applicant in the field. In addition to the evaluation of the applicant, the presence of the authorial voice (the individual reviewers) in the A1 reports has an important role in instructing and persuading the readers, and can also distinguish a suite of A1 reports from a suite of B1, C1 or Y1 reports. The reports for the A1 rated researcher appear more 'factual' than those for the other rating categories, further cementing the notion that the A1 researcher is unequivocally recognised as an international leader in the field. This is discussed in more detail in section 4.3.3.1.

#### **4.2.3.2 Construing the B1 Rated Researcher**

Construing a B1 rated researcher is a rather more subtle task that involves what is *not* said about the applicant nearly as much as what *is* said. The B1 rated researcher is the 'middler' who falls between the top and bottom rating bands, and the reports lack the intense praise of the A1 reports as well as the rather more frequent criticisms found in the C1 (and Y1) reports. The B1 reports are, on average, significantly shorter than those for any of the other rating categories (542 words- see Appendix 1, Table 6.2), with fewer instantiations of Attitude per report (50 instantiations- see Appendix 1, Table 6.1). Although the majority of Attitudinal evaluations in the B1 reports are positive (87%), which is more than one finds in the C1 and Y1 reports (83.3% and 81.4% respectively - see Appendix 1, Table 6.4), it is significantly less than the A1 reports (96.2% positive evaluations). The positive evaluations of the applicant and his/her work are also, overall, rather more restrained than those for the A1 applicant. There is less Graduation per report, on average (28 instantiations, compared to the A1 reports 38

instantiations- see Appendix 1, Table 6.1) and there is considerably more downscaled and less upscaled Force (see Appendix 1, Table 6.7). So although one does find very high praise of the B1 applicant, one also finds evaluations such as:

- *I think the quality [of the work] is generally very high* (subjective Pronouncement, positive Valuation, upscaled quality, softened Focus) (22; 171);
- *Whilst Dr \*\*\*\* is undoubtedly well known internationally* (positive Reaction and Valuation, Affirmation), *I doubt* (subjective Pronouncement) *whether this is as much for his ground-breaking contributions to biology, as it is for his consistent, good quality research outputs* (negative/positive Valuation) (101; 271-272).

Unlike the A1 reports, one does find the occasional criticism of the applicant, his/her work, or some aspect of his/her career in general. It must be noted that there are fewer criticisms of the B1 applicant than there are of the C1 and Y1 applicants, clearly an indication of the reviewers' distinction between the applicants in terms of their relative standings in the community and the quality and impact of their work. Criticisms involve the strategic use of evaluations and, in all the reports, but particularly the B1 reports, are made politely and with careful attention to the readers, and how they might interpret these criticisms (see section 4.3.3.2). In this section, I will focus on what the general weaknesses of a B1 applicant are perceived to be, and how they construe a researcher just below the top rating band.

Nearly all reviewers are agreed that the B1 applicant meets the criteria outlined in section 4.2.2. However, although the applicant is regarded as internationally respected and being within the upper sector of researchers within his/her particular field, he/she is not seen by all reviewers as one of the top international leaders, for example:

- *There can be no doubt* (Affirmation) *that \*\*\* is a leader* (positive Valuation) *in the South African national context in the field of conservation biology. He also has a very well established international profile* (positive Valuation, upscaled quality) *and is in my view considered* (Entertainment, Acknowledgement) *an international leader* (positive Valuation, upscaled presence) *in his field of insect conservation biology* (16; 175-177);
- *Of the conservation planners the applicant would be amongst the top 20 (top 2%)* (positive Valuation, Entertainment) *and hence across the entire discipline he would rate amongst the top 10% quite comfortably* (Entertainment, positive Valuation, downscaled quality) *(but not in the top 1%)* (negative Valuation) (22; 183-185).

The journals in which the applicant publishes, how the research is distributed, and the overall quality and impact of the applicant's work (which is not generally as wide as that of the A1 applicant) is also sometimes less than perfect, and this is seen in instantiations of negative Valuation, for example:

- *I think the quality is generally very high* (subjective Pronouncement, softened Focus, upscaled quality), *but probably not earth-shattering* (Entertainment/Counter, negative Valuation, downscaled quality, softened Focus) (22; 171-172);

- ...his name will be familiar (positive Valuation, softened Focus) to many but he has not contributed a single outstanding piece of research that everyone knows about (negative Valuation, upscaled presence, Denial/Counter) (101; 140-142);
- ...a journal that I would consider to be parochial (negative Valuation. Subjective Pronouncement) (101; 395-396).

Because the B1 applicant is nonetheless a highly respected researcher, criticisms can be less straightforward than the examples above, and may involve multiple-coding that simultaneously praises and criticises the applicant, or the juxtaposition of positive and negative evaluations, for example:

- My personal view (Entertainment) *is that \*\*\*\*'s work is not as widely acknowledged as it deserves to be* (Triple-coding: positive Capacity of the applicant, positive Valuation of the work, invoked negative Tenacity of the applicant, downscaled Distribution (space))...*Thus, \*\*\*\* has not quite succeeded in capturing the international limelight and becoming a household name in the field of socio-biology* (negative Tenacity, downscaled process, Denial) (101; 146-152);
- If a flaw is to be found (Entertainment, negative Valuation) *in his formidable track record* (positive Valuation, upscaled presence)...(101; 288).

Reviewers also sometimes suggest, and evaluate positively, alternative courses of action the applicant could take in order to improve his/her standing or quality of work, or excuse/justify some of the criticisms they make, for example:

- My feeling is that (Entertainment) *a more general applicability of \*\*\*\*'s work to the wider rodent reproduction field is desirable* (positive Valuation of alternate option, upscaled Distribution (space)), *but please note I am not a rodent reproductive biologist and this is not my field* (negative Capacity of reviewer, Denial/Entertainment) (101; 430-432);
- ...his postgraduate program does not appear to be very strong (negative Valuation, downscaled quality, Entertainment). This may be (Entertainment) *because insect conservation is less generally appealing* (negative Reaction, downscaled quality) *than vertebrate conservation* (16; 197-198).

Such strategies have the effect of downplaying the criticisms such that they are not too damaging to the reviewers' overall very favourable assessments of the applicant. They are also mechanisms for persuading reviewers to take a particular stance and thus frequently involve politeness strategies, and ways of hedging statements that could be potentially threatening to the readers or scientific community (as can be seen clearly in the first example above): this strategy for criticisms is addressed in section 4.3.3.2.

Despite criticisms such as those mentioned in this section, the general impression the reviewers have of the B1 applicant is very positive. Although they are far less frequent in the B1 reports,

one does find some rather more personal evaluations of reviewers' interest in the applicant's work that are more common in the A1 reports, for example:

- *\*\*\*'s work continues to be interesting (positive Reaction), exciting (positive Reaction, upscaled quality) and truly outstanding (positive Valuation, upscaled quality) (101; 100);*
- *...on the whole, his work's fascination and intrigue (positive Reaction, upscaled quality) lies with the particular direction that rodent evolution has taken in Southern Africa (101; 367-368);*
- *I would not hesitate to try and hire him (Double-coding: positive Reaction and Valuation, subjective Pronouncement, sharpened Focus) (22; 156).*

Evaluating a B1 rated researcher involves, it would seem, an almost entirely positive assessment, but shorter and less detailed than an A1 rated researcher, and lacking the frequent, upscaled Graduations that give the A1 reports their intensity. Some (but not all) of the reviewers make the occasional criticism, but they do not concern fundamental aspects of the applicants' work (such as the validity or general value of the research). They are also not particularly detrimental to the overall assessment. Importantly, however, they often concern the standing of the applicant. According to the reviewers, the B1 researcher has not quite reached the level within the community that the A1 researcher has reached. This is noted by the reviewers, and it is probably one of the most obvious indicators of a B1 rating. Criticisms are also made very tentatively and politely, often together with advice or recommendations. These are clear indicators of engaging with readers in order to negotiate potentially controversial or face-threatening issues (see section 4.3.3.2).

#### **4.2.3.3 Construing a C1 Rated Researcher**

The C1 rated researcher is in the bottom rating band for established researchers, and is therefore construed as having more shortcomings and a lower standing than the A1 and B1 rated researchers. Although the C1 researcher meets nearly all the criteria discussed in section 4.2.2, it is to a lesser extent than the higher ranked researchers, and so in addition to general praise, there are more criticisms than one finds in the B1 reports. The C1 reports are, on average as long as the A1 reports (about 700 words - see Appendix 1, Table 6.2), and they contain the highest number of evaluations i.e. instantiations of Attitude per report than any other category (57 instantiations on average - see Appendix 1, Table 6.1). However, the nature of these evaluations is often quite different from the A1 and B1 reports as can be seen from the relative prevalence of the various APPRAISAL features: there is an increase in the proportion of negative evaluations (16.7% compared to 3.8% in the A1 reports and 13% in the B1 reports - see Appendix 1, Table 6.4), a decrease in the average number of instantiations of Graduation

per report (24 instantiations compared to 38 in the A1 reports and 28 in the B1 reports - see Appendix 1, Table 6.1), and significantly more downscaled Force (19.3% compared to 6.5% in the A1 reports and 12.3% in the B1 reports - see Appendix 1, Table 6.7). These differences alone suggest that we are to expect reports more detailed than the B1 reports, with praise that is more moderate (less Graduation, more of it being downscaled), and more criticisms of the applicant, or negative evaluations of various aspects of his/her application or general standing within the community. Valuation, which is the most common Attitude type for all four rating categories, is also the one most frequently downscaled, for example:

- *Slightly more restricted circulation journals* (negative Valuation, downscaled quality/Distribution (space)) (3; 117-118);
- *The material used is quite rigorously tested and evaluated* (Double-coding: inscribed positive Valuation, invoked positive Tenacity, downscaled, quality) (102; 206-207);
- *It appears that* (Entertainment) \*\*\* *has served as the first author or the senior mentoring author in most publications* (positive Valuation, and (in this instance) downscaled number) (102; 271-272);
- *It would appear that* (Entertainment) *the applicant already has a high national and international standing* (positive Valuation) (3; 295-296).

Importantly, while all the reviewers agree that the applicant is recognised nationally and internationally, the standing of the C1 applicant is not seen as being as high as that of the B1 applicant, and most certainly not as high as the A1 applicant. The reviewer reports for Applicant 102 (C1 rated researcher) appear at first glance to be exceptional as the applicant is construed more positively overall than the other C1 rated applicants. However, Applicant 102's field of research, Veterinary Radiology, is more restricted than the other applicants' fields and so the applicant's work has a narrower overall impact. This suggests that the impact and influence of the work and its innovativeness are as important as the reviewers' estimations of the applicant's standing within the community.

In the C1 reports, one finds some criticisms similar to those in the B1 reports, concerning the journals in which the applicant publishes and the impact of the work. In the C1 reports, however, they are more frequent and sometimes made less tentatively i.e. they are rather more damaging to the ideal 'perfect scientist' and construe a researcher at a lower level, for example:

- *I found that* (subjective Pronouncement) *the data relating to various disciplines to be very weak* (negative Valuation, upscaled quality), *in regard to both the data presented and the description of the methods involved* (negative Composition) (3; 218-219);
- *The physical data, when presented, is not very good* (negative Valuation, downscaled quality) (3; 224).

It is interesting to note the role of negative Composition in the first example above. A rarely used Attitude type, it can clearly distinguish between the A1 rated researcher, whose work is

perfectly cohesive, and the lower C1 and Y1 categories whose work may sometimes be less so, as in the example provided.

Criticisms are, however, generally made a little more politely and tentatively than the examples above, with the reviewers providing justifications or explanations for the negative evaluations, and using multiple-coding strategies. This appears to be more characteristic of the genre than the B1, C1 or Y1 reports *per se*: it is more appropriate to hedge criticisms and not to state categorically what is or is not required in order to be a scientist of high standing within the community. However, because criticisms become more common in the lower rating categories, such strategies become more frequent too, for example:

- *Her research is not supported by “high impact factor” journals* (negative Valuation), *a fact that should not be held against her work* (positive Valuation of the work, objective Pronouncement), *or indeed quality, but merely is a reflection of a general trend characteristic of her chosen field of research* (Counter/objective Pronouncement, negative Capacity of the applicant) (15; 232-234);
- *Prof\*\*\*’s work could have a much higher profile* (Double-coding: inscribed positive Valuation, invoked negative Tenacity, Entertainment, upscaled presence)... *Greater international exposure of the science and involvement in wider international programmes will be valuable for both Prof\*\*\* and the community* (positive Valuation of an alternate option for the applicant, upscaled Distribution (space)) (3; 127-130);
- *He appears to be* (Entertainment) *less known in the estuarine research community, possibly due to his very recent entry into this discipline* (negative Valuation, Entertainment, downscaled quality and upscaled Proximity (time)) (3; 168-169).

As with the B1 reports, advice and suggestions are found too, and also appear to be a characteristic of the genre: if the reviewers are in a position to evaluate something negatively, then they should also be in a position to suggest how it might be remedied. Obviously it is more constructive (and therefore less detrimental) to provide advice, but it also shows that the reviewers themselves are *au fait* with what is required in order to be recognised as an established researcher: this is an indication of their community membership (see section 4.3.2). Advice often involves multiple-coding with both positive and negative evaluations, for example:

- *I think it would be very productive* (positive Valuation of alternative option for the applicant, subjective Pronouncement and upscaled quality) *if Dr\*\*\* would work co-operatively with such expertise* (positive Tenacity required of the applicant) *and produce some multi-authored papers that would pass scrutiny by experts in physical, chemical, and optical fields, in addition to the biological data* (positive Valuation of alternative option for the applicant) (3; 231-232).

The C1 reports also lack some of the positive evaluations found in the A1 and B1 reports, which would probably be expected for a researcher at an earlier stage in their careers, for example: his/her teaching records may be a little more limited, he/she is not likely to be the leader of a large research group, and is unlikely to have had as many invitations to present at conferences or submit papers to journals than the higher rated researchers would have had. Reviewers are also less familiar with the applicant and so one finds more self-evaluations of negative Capacity, for example:

- *I am far less familiar with the more recent work on temporary open/closed ecosystems and thus will not comment on it* (negative Capacity, upscaled quality) (3; 19-20).

Construing a C1 rated researcher therefore involves a predominantly positive assessment of the applicant, but with noticeable areas of weakness mentioned by several reviewers in a single suite of reports. The praise of the applicant is also more guarded and less extreme than one finds in the A1 reports, and the reviewers place the applicant in the upper sector of researchers within the relevant field, nationally and internationally, but not at the very top.

#### **4.2.3.4 Construing the Y1 Rated Researcher**

Before I report on the assessments of the Y1 researchers, it must be noted that such a researcher, due to his/her limited experience and time spent conducting research in the field, is not expected to meet all the criteria discussed in section 4.2.2 (such as being the leader of a large research group, or having an exceptional teaching record), nor to have the same accomplishments or standing within the community. The NRF criteria for a researcher rated in this category (see Appendix 6) focus on the *demonstrated potential* of the applicant to become an established researcher or even a leader in the field rather than the accomplishments of the past seven years. As a result, one finds in the Y1 reports, more than in the reports for the other rating categories, emphasis on future possibilities. Thus, although I draw comparisons between applicants in all four rating categories in terms of the extent to which they can be seen as representing the ‘good scientist’, the Y1 applicant can be considered as more of a ‘special case’ involving slightly different criteria. One reviewer (Reviewer 7 for Applicant 8) states explicitly what he/she perceives as the benchmark for the assessment of a Y1 applicant:

- **Clearly** (Affirmation) *an application for the status of independently-funded researcher must include* (objective Pronouncement) *evidence of a clear commitment to furthering our scientific knowledge and understanding* (positive Tenacity, sharpened Focus) *in the chosen field, and also an ability to generate new ideas* (Double-coding: inscribed positive Capacity, invoked positive Normality) *and drive forward investigations* (positive Tenacity) *to achieve useful results* (positive Valuation) (8; 280-282).

In this example, one sees less focus on upscaled Valuation (so prevalent in the A1 reports, for example), and more on behaviour attributes, particularly Social Esteem. It seems that the reviewers consciously construe the Y1 applicant differently from the A1, B1 and C1 rated researchers: rather than take for granted what is required to be a ‘good scientist’, they articulate it more explicitly, and are therefore more clearly identifying the boundaries, values, conventions and entry requirements for their community.

To begin with however, as one might expect, there is a higher proportion of negative evaluations (18.6% - see Appendix 1, Table 6.4) compared to the reports for the other rating categories. There are also fewer instantiations of Graduation per report, on average (22 instantiations - see Appendix 1, Table 6.1), and more Engagement and more politeness strategies, suggesting that there are more criticisms, and more hedging and deference politeness in the Y1 reports (see section 4.3.3.4 for more detail). Before I go on to a discussion of all the shortcomings of a Y1 rated researcher that sets him/her apart from the more established researchers, it is worth noting that the general impression the reviewers have of the applicant is very positive (note that the A1 and the Y1 reports have the highest proportion of Reaction overall - see Appendix 1, Table 6.3 - even if it is not always as positive or extreme in the Y1 reports). The nature of Reaction that is used in the Y1 reports is quite different to that found in the A1 reports: rather than awe and respect, the enthusiasm expressed concerns anticipation and encouragement, clearly an indication of a scientist at an earlier stage in his/her career. The reviewers do take into consideration the limited experience of the applicant and the rather more restricted circumstances under which he/she operates, and are sometimes rather more generous in their evaluations than they appear to be for the A1, B1 and C1 researchers, for example:

- *I was also pleased to see* (positive Reaction, subjective Pronouncement) *that the majority of her work has been published in internationally well recognized journals* (positive Valuation, upscaled mass and presence), *even if none of the publications is in a general top journal* (Concession, negative Valuation) (7; 76-78);
- *I admire* (positive Reaction) *the skills* (positive Capacity) *and logistical organisation* (positive Tenacity) *required for the type of work that Dr\*\*\* does* (4; 234-235);
- *To be asked to conduct such a review...is quite a feat for someone 3 years out from a PhD* (Double-coding: inscribed positive Normality, invoked positive Capacity, sharpened Focus) (4; 68-69).

Rather than its profound and wide inter-disciplinary impact, the quality of the Y1 applicant’s work is assessed in terms of how sound and original it is. Unlike the A1, B1 and C1 reports, there is slightly more contention amongst reviewers concerning this aspect of the applicant’s work. The result is that the construal of the Y1 rated researcher is rather more conflicted and

less definitive than it is for the researchers in the higher rating categories. In the suite of reports for Applicant 8, for example, one finds:

- *Although at first glance one might think that some of the experiments were just repetitions of the work of other researchers* (Entertainment, downscaled number, negative Valuation) *in the field on other animals, I consider* (subjective Pronouncement) *the utmost* (upscaled mass) *of her contributions as novelties* (Double-coding: inscribed positive Valuation, invoked positive Normality) (8; 14-16);
- *This work ... does not represent an innovative approach to the study of peptides* (Double-coding: inscribed negative Valuation, invoked negative Normality, Endorsement) (8; 161-163).

The originality of the applicant's work is closely linked to the extent to which the Y1 researcher is functioning independently of his/her mentors, supervisor, and more senior researchers. While this is to be taken for granted for an established researcher in the A1, B1 and C1 rating categories, it is a requirement that needs specific scrutiny for a Y1 applicant. Again, one finds some contention amongst reviewers concerning how far a Y1 rated researcher has achieved this independence, for example:

- *Although Prof. G may often have been the "intellectual driving force" behind her broadening of research efforts* (Double-coding: inscribed positive Valuation of Prof. G (the applicant's supervisor), invoked negative Tenacity of the applicant, upscaled quality) *to insect endocrinology, in this field as well her impact is considerably high* (Concession, positive Valuation of the applicant, upscaled quality) (8; 38-39);
- *She states the dilemma quite clearly herself* (Acknowledgement, upscaled quality): *"Thus far, Prof. G. has been the major intellectual driving force* (positive Tenacity of the supervisor, upscaled quality) *behind the projects and I have provided quality technical input* (positive Valuation)..." *I have absolutely no doubt about Dr. \*\*\*'s technical expertise* (positive Capacity, subjective Pronouncement, sharpened Focus), *but this makes her a superb technician, rather than a good researcher* (Counter, positive Valuation, upscaled quality, followed by evoked negative Valuation) (8; 172-175).

The standing of the Y1 applicant within the community is also considered to be high by some reviewers, but much lower by other. For example:

- *She can be regarded* (objective Pronouncement) *as a leader in this particular field* (positive Valuation) (7; 179-180);
- *Her current standing is probably* (Entertainment) *moderate* (negative Valuation, downscaled quality) *relative to peers in the field at both national and international levels* (7; 239-240).

More outright criticism of the applicant and his/her work is found in the Y1 reports, and often they are noticeably more damaging to the overall representation of the applicant, with little to hedge them or make them more polite, for example:

- *One of Dr\*\*\*'s graces is not modesty* (Double-coding: evoked negative Reaction and Propriety) (4; 118);

- *It is painfully clear* (negative Reaction, Affirmation, figurative upscaled quality) *that Dr\*\*\* has had little international exposure* (negative Valuation, downscaled mass) (4; 148).

Especially interesting is the first example above, when contrasted with an evaluation in the reports for Applicant 12 (an A1 rated researcher):

- *Some of the recent important contributions from this group are also listed (with rather modest comments) in Dr\*\*\*'s application* (positive Propriety, softened Focus) (12; 300-301).

Naturally, modesty is a more desirable quality than arrogance, but it is easier for a top researcher, secure in his/her success and esteem to be modest, whereas a younger researcher, trying to capture the attention of the community, cannot afford to be anything but very assertive. What one reviewer for a Y1 applicant might interpret as assertiveness, another construes as arrogance: this shows the influential role of the reviewers' assessments in construing a particular image of the applicant, and steering the readers towards one representation rather than another.

Mostly however, criticisms involve positive and negative evaluations working together. Although undoubtedly this can be seen as a form of hedging or politeness, it is also an indication of the balance between the applicant's strengths and weaknesses, and is therefore important in construing an applicant with excellent potential, but still some improvements to make, for example:

- *This work is solid and a valuable contribution* (positive Valuation) *to the scientific literature, but does not represent an innovative approach to the study of peptides* (Counter, Double-coding: inscribed negative Valuation, invoked negative Normality) (8; 161-163);
- *One would regard* (Entertainment) *\*\*\* as a reasonably productive* (positive Tenacity, downscaled quality), *fairly average researcher* (negative Valuation, downscaled quality) (8; 169-170).

As can be seen from the examples above, Graduation plays an important role in such evaluations: there is more downscaling which moderates both the positive and the negative evaluations, thus avoiding excessive praise or criticism. The role of Composition in the reports for the Y1 researcher is, more frequently than in the reports for the other rating categories, to comment on the documentation submitted to the NRF by the applicants and received by the reviewers for comment in their evaluation reports. It is usually negative rather than positive, for example:

- *Even though her application showed* (Endorsement) *clear research focus in terms of planned and future research* (Double-coding: inscribed positive Composition, invoked positive Tenacity), *I did not get a clear sense of where she sees herself in five years from now* (Double-coding: inscribed negative Composition, invoked negative Valuation, Concession, upscaled Proximity (time)) (7; 33-35).

Such evaluations are rather more characteristic of the Y1 reports than the reports for the other rating categories.

Advice is far more frequent in the Y1 reports than it is in the reports for the other rating categories. Although, as I mentioned in the previous section, this would appear to be characteristic of the genre, it also seems that a younger researcher is probably in a better position to receive advice than a more established researcher, not yet being fully independent in his/her own right, and still under the direction of more experienced researchers. In addition, the reviewers are, significantly, not always peers of the Y1 applicant but former supervisors, external examiners, etc. It is therefore in keeping with the values of the community and an indication of a younger researcher, that the more experienced researchers provide counsel and guidance in order to assist the applicant in elevating his/her individual standings. Like the B1 and C1 reports, advice generally involves multiple-coding and evaluations which simultaneously praise and criticise the applicant or some aspect of his/her work, for example:

- *Dr\*\*\* would do well* (objective Pronouncement) *to broaden her horizons by spending a period of post-doctoral training in an excellent laboratory in the US or Europe* (Double-coding: inscribed positive Valuation of an option for the applicant, invoked negative Tenacity of the applicant) (4; 150-151);
- *The applicant has excellent potential* (Double-coding: positive Capacity and Valuation) *to become an independently established scientist* (positive Valuation). *The applicant should* (objective Pronouncement) *be encouraged to initiate research independent of her previous and current mentors* (Double-coding: inscribed positive Reaction, invoked negative Tenacity of the applicant) (7; 52-53).

By suggesting that it is the Tenacity rather than the abilities of the applicant (Capacity) or quality of his/her work (Valuation) that needs improvement, the reviewer does not compromise the positive evaluations of the applicant's potential.

In addition to features mentioned in this section and some of those mentioned in section 4.2.2, construing a Y1 rated researcher involves considerable negotiation of stance with the readers, hence why there is more Engagement and politeness overall in the Y1 reports (see Appendix 1, Table 6.1). Certainly much of the advice, suggestions and criticisms seem to be made with the purpose of construing a young researcher with some very noteworthy accomplishments and standing within the field, but some way to go before being recognised as a top researcher. However, in the Y1 reports, there also seems to be more of a concentrated effort made by the reviewers to define the scientific community, what is valued, and what is required of both younger and more established researchers, thus preserving the hierarchy within it, and the lower standing of the Y1 researchers.

#### **4.2.4 Conclusion**

In section 4.2 I have provided a description of the evaluative language in the peer reviewer reports and shown that although there is a great deal in common in the reports for all four rating categories, there are also very clear differences between the reports for the A1, B1, C1 and Y1 rated researchers. Even at this stage, based on the analysis, one can see that it is possible to allocate a rating category simply based on how the applicant is represented by the reviewers to the members of the NRF Assessment Panel. However, in order to attain a better understanding of how reviewers engage with, persuade, and in more subtle ways instruct the reviewers to award a particular rating category, and in order to see how reviewers assert their suitability as reviewers and enact their membership of the scientific community, a second dimension to the analysis is required i.e. the role of instructive language. This is the focus of the following section, 4.3.

### **4.3 Instruction in the Peer Reviewer Reports**

#### **4.3.1 Introduction**

In this section, I focus on those linguistic strategies that are most explicitly ‘instructive’ i.e. those which highlight the dialogic nature of the reports, and the negotiation of stance between the reviewers and the readers. In writing an assessment report, the reviewers are providing a specific representation of the applicant that will correlate with one of the NRF rating categories (even if the reviewers are not aware of what these categories are and what the outcome will be for the applicant). How reviewers persuade their readers that their representation of the applicant is reliable hinges on their use of instructive language. Reviewers need to take on multiple roles (the ‘colleague’, the ‘teacher’, the ‘authority’, the ‘servant’, etc.) and engage multiple audiences simultaneously in order to protect their own interests and that of the scientific community. How this is achieved in the reviewer reports is discussed in this section. In section 4.3.2, I address some of the general strategies found in the reports for all four rating categories, and in section 4.3.3 I look to some of the differences in the reports for A1, B1, C1 and Y1 rated applicants which, together with their slightly different evaluations (see section 4.2.3), serve to distinguish the applicants from one another.

#### **4.3.2 The Role of the Reviewers in Enacting Membership of a Scientific Community**

##### **4.3.2.1 The Reviewer as an ‘Authority’**

When enacting the role of the authority figure in the reports, reviewers need to assert themselves strongly as members of the discourse community, well-placed and well-informed

enough to provide a suitable assessment report. In addition, and particularly for some of the Y1 and C1 rated researchers, the reviewers need to place themselves above the applicant in terms of ranking within the community hierarchy, in order to justify providing advice, suggestions and recommendations.

Firstly, as I mentioned in section 1.4, the opinion of the ‘expert’ is considered to carry the most authority in the rating process, hence why reviewers are required to state their familiarity with the applicant and his/her work. The most basic way in which a reviewer indicates his/her authority is through self-evaluations of evoked positive Capacity, for example:

- *I say this from the perspective of also being one of the top marine ecologists in the world* (Double-coding: inscribed positive Capacity and Valuation of the reviewer, upscaled presence, subjective Pronouncement), *and thus having an excellent sense of the magnitude, range and impact of his scientific activities at several levels* (Double-coding: inscribed positive Capacity and Valuation of the reviewer, upscaled quality) (12; 46-48).

Although the above is a more explicit example, reviewers are often more indirect (and humble!) when evaluating themselves, for example:

- *I know the applicant very well, visiting her many times* (evoked positive Capacity, upscaled quality and Distribution (time)) (15; 71).

Familiarity with the applicant’s work and having cited it, also indicate the reviewer’s suitability and ‘authority’ as an assessor. Such evaluations involve mostly evoked evaluations and multiple coding, for example:

- *I have read all of Prof\*\*\*’s work on Southern Ocean Ecosystems* (Double-coding: evoked positive Valuation of the work and Capacity of the reviewer, upscaled mass) *and I have cited some of his studies* (Double-coding: evoked positive Reaction and Valuation of the applicant’s work) (3; 55-56).

Reviewers themselves clearly perceive the importance of ‘knowing what they are talking about’ when assessing the applicant: some even indicate where their evaluations should be received with caution by the readers (these are often negative evaluations), as they may be slightly ill-informed and not emanating from the ‘authoritative expert’ a good reviewer needs to be, for example:

- *It is difficult for me, in America, to assess the value of his research productivity in South Africa* (negative Capacity, deference politeness) (3; 92-93);
- *I have zero experience of the South African academic community* (negative Capacity, Denial), *the funding limitations, or time constraints that may impact on a research career. I also approach his contributions from a perspective that is very much the second string to his bow and cannot comment on...* (negative Capacity, Denial, upscaled quality, deference politeness) (16; 312-315).

I have identified the examples immediately above as instantiations of deference politeness towards the readers (the NRF Assessment Panel) i.e. protecting their negative face. At a rather obvious level, they do also protect the positive face of the applicant (i.e. they make the negative evaluations that precede them less damaging). However, it seems more likely to me, and more in tune with the purpose of the report, that the reviewers are suggesting their readers are not (and should not be) constrained to fully endorse some of the evaluations made (or that the reviewer is about to make) due to the compromise to the reviewer's position as an authority.

Providing advice or suggestions to applicants as to how they might improve their standing within the community or impact of their work, is also a way for reviewers to proclaim their authority. Advice, as I mentioned in sections 4.2.3.2 to 4.2.3.4, involves multiple-coding that may simultaneously praise and criticise the applicant, or evaluate alternative options for the applicant, for example:

- *Prof \*\*\* should be encouraged to aim at this more general literature* (Double-coding: evoked positive Capacity and negative Tenacity of the applicant, objective Pronouncement, deference politeness); *much of his work is worthy of publication here* (positive Valuation) and *it would have a broader impact* (Double-coding: inscribed positive Valuation of the work, evoked negative Tenacity, upscaled Distribution (space), objective Pronouncement, deference politeness) (16; 60-61);
- *I think that she ought to increase her annual research output* (Double-coding: positive Reaction, negative Tenacity, objective Pronouncement, deference politeness). *This increase should not be done by decreasing the quality* (Double-coding: negative Valuation of an alternative option for the applicant, evoked negative Tenacity, objective Pronouncement, deference politeness), *but especially by making more use of her national and international network* (Counter, Double-coding: positive Valuation of an alternative option for the applicant, evoked negative Tenacity) (7; 133-136).

Again, rather obviously, reviewers are showing that they are in a position to critique the applicant's career, as perhaps they can tell what improvements need to be made where the applicants cannot. However, because the applicants are not the naturalised or perceived readers of the reports, it seems more likely that reviewers provide advice for the sake of the readers: to show that the ability to note where the applicant's weaknesses are and how they may be improved signifies the voice of a well-informed authority. The use of heteroglossia (in this case objective Pronouncement) makes such evaluations seem more tentative, but clearly in these examples this is a convention of the discourse, not due to genuine uncertainty, and so they also function to show deference to the scientific community: *suggesting* improvements is more polite and less threatening than *dictating* them. In addition, readers need to be convinced in varied and subtle ways that the reviewer is an authority, and advice is just one such way of doing so.

Another way of doing so is to draw comparisons between the applicant and the reviewer, and the applicant and other researchers. Sometimes this is to the applicant's advantage, sometimes not, for example:

- *I think that the output should have been higher* (negative Valuation, upscaled mass, subjective/objective Pronouncement, deference politeness). *In my research school we strive for two international peer-reviewed papers per year for each member* (positive Valuation, upscaled number); *we do not mind whether these are multi-authored papers, because we believe in (inter)national cooperation* (evoked positive Valuation, subjective Pronouncement, deference politeness) (7; 104-106);
- *He has the unique distinction of being the only person who has two former PhD students who are Pew Fellows* (Double-coding: evoked positive Normality and Valuation) (100; 292-293);
- *Many elderly scientists slow down their scientific production with age* (negative Capacity). *However, in this case, we are dealing with a very active scientist* (positive Tenacity, upscaled quality) (12; 258-260).

One can see in examples such as these that there is not always even a need for deference politeness, particularly in the case of the A1 applicants (examples for Applicants 100 and 12 above) where such claims are not considered threatening and agreement with them is expected.

The role of deference politeness in some of the examples above does most certainly function to highlight, by more understated means, the role of the reviewer as an authority. How it does this, however, brings us to the second major role a reviewer must enact: that of the reviewer as a 'servant' of the research community. This means protecting the values and standards of the community by using the 'correct' discourse, and avoiding threats to the face of the readers or scientific community with individual over-assertiveness. How reviewers downplay their own authority for the sake of the community is addressed in the following section.

#### 4.3.2.2 The Reviewer as a 'Servant'

So far, I have discussed the role of heteroglossia and politeness in the peer reviewer reports only in passing, but it is an especially important strategy in the alignment of the readers, as it is a convention of the discourse that construes the reviewers as "servants of the discipline" (Hyland 1994: 241) and thus protectors of the scientific community. In this section I begin with a discussion of solidarity politeness and the corresponding APPRAISAL categories, followed by a focus on deference politeness, which is the more prevalent type.

Solidarity politeness protects the positive face of those potentially threatened by an evaluation. There are a variety of ways in which it may be expressed (see Appendix 1, Table 6.11 and Table 2.4 for more examples) but the most frequent type of solidarity politeness correlates with

the APPRAISAL categories of Affirmation, and positive Reaction (see Appendix 1, Table 6.11), for example (politeness strategies are in bold-type):

- *There has **certainly** (Affirmation, solidarity politeness) been much more activity with small mammals, clearly for logistical reasons* (evoked positive Tenacity, upscaled mass, **Affirmation, solidarity politeness**) (4; 254);
- *It was her original observations that **revealed** (Endorsement) the extraordinary adaptations (positive Reaction, upscaled quality, solidarity politeness) displayed in these rodents* (101; 348-350);
- *He is **clearly** the most recognizable and important figure in marine ecology in South Africa and the continent of Africa* (positive Valuation, upscaled quality, **Affirmation, solidarity politeness**) (100; 195);
- ***Obviously** (Affirmation, solidarity politeness) animals living both in their natural habitat and social interference system employ thermoregulatory mechanisms different from those by animals kept in captivity* (12; 33-34).

Examples such as these show that the reviewer is naturalising readers who are not completely ignorant or unable to draw their own conclusions, and this attends to their positive face because it grants them a position of knowledge, whether they actually have it or not (the fourth example is not ‘obvious’ to me for instance, and apparently was not at all ‘obvious’ to the scientific community either, until Applicant 12 proved it definitively). Affirmation is a contractive heteroglossic APPRAISAL type, specifically, a type of *Concurrence*. By defining this kind of politeness in terms of APPRAISAL, we see that the emphasis really is on *shared* knowledge or attitudes (often positive Reaction). Readers are positioned as already aligned with and sharing such knowledge or attitudes by the contraction of dialogic space. They are assumed (or construed) not to expect or wish for an alternative interpretation.

Deference politeness, however, is the most common politeness strategy for the reports in all four rating categories (see Appendix 1, Table 6.10), and although solidarity politeness clearly has useful and interesting effects, most of the ‘work’ of being a ‘servant’ is achieved through deference politeness. Deference politeness in my analysis, as I mentioned briefly in section 4.3.2.1, attends to the negative face of the readers (who can be referred to as the exoteric audience - see section 2.4.5) and the general scientific community (the esoteric audience): it is the reasoning behind ‘hedging’ evaluations i.e. making them seem more subjective and tentative (see section 2.4.3). The two most frequently utilised APPRAISAL types for deference politeness are Entertainment and subjective Pronouncement (see Appendix 1, Table 6.12). In addition to dividing objective and subjective Pronouncement (they are not divided into separate categories in Martin & White 2005), I have modified the boundaries between Entertainment and Pronouncement as defined by Martin & White (2005) (please refer to section 2.3.4.2, pages 55-56). This has proven very useful in differentiating between different kinds of deference

politeness and understanding their various effects. Take the following examples (politeness strategies are in bold-type):

- *He is intimately involved (positive Tenacity, upscaled process) in conservation science here, and **in my view** (subjective Pronouncement, deference politeness), has helped to make South African attitudes and actions regarding marine conservation among the most advanced in the world (Double-coding: positive Tenacity and Valuation, upscaled quality) (100; 72-74);*
- ***If a flaw is to be found** (negative Valuation, Entertainment, deference politeness) in his formidable track record, it is his **apparent disinterest** to view sociality within a broader context (negative Tenacity, Entertainment, deference politeness) and to be **apparently constrained** in his thinking (negative Capacity, Entertainment, deference politeness) by the fact that his study subjects are fossorial (101; 288- 290).*

Both the examples above contain deference politeness strategies, but clearly in different ways and with different effects. The first is a very positive evaluation of the applicant. The personal investment in the evaluation (*in my view*), coming from the voice of an ‘expert’, I see as subjective Pronouncement because it is contractive, not expansive: the point is to head off alternative interpretations, not to entertain them. The personalisation of the evaluation makes it deference politeness because it construes the evaluation as rather more personal and subjective, even if it is not meant to be interpreted as such. Making very positive or very bold claims in this way is characteristic of the discourse. It is less face-threatening and imposing, and more appropriate to *persuade* readers to accept such claims, rather than presenting them as monoglossic, or purely ‘factual’, and expect readers to take them as given. The second example is also deference politeness, but this time concerns a criticism and is clearly more expansive than contractive (hence the categorisation of Entertainment rather than subjective Pronouncement). The reviewer seems more tentative and rather less committed to the negative evaluations than the reviewer in the first example (clearly the reviewer does not want to damage the positive representation of the applicant too much). ‘Hedging’ criticisms in this way is also characteristic of the discourse. It protects the negative face of the readers and scientific community by freeing up some dialogic space for disagreement. It ‘serves’ the discipline by avoiding overly detrimental or damaging criticisms to one’s peers. Considering that the second example comes from a report for a B1 rated researcher, it is most clearly not intended to be interpreted as carrying much weight. Because the duty of members of the scientific community is believed to be the advancement of the field and the community as a whole (see section 2.4.3), it is in the interests of the reviewer to downplay criticisms, and make them less assertive and more constructive (note the juxtaposition of positive and negative evaluations in the second example above).

The various conventions reviewers for researchers rated in the different categories draw upon in order to preserve the discourse and values of the community are given more attention in sections 4.3.3.1 to 4.3.3.4. Section 4.3.2.3 below, however, explores how combinations of different APPRAISAL and politeness types are used strategically, and in keeping with the general conventions of the discourse, in order to position readers and align them with a particular stance.

#### 4.3.2.3 The Reviewer as a ‘Persuader’

Instructing the readers to award the appropriate rating category, to identify a particular representation of the applicant, and align themselves with the reviewers’ stance towards the applicant is a highly complex undertaking, as we have seen from this chapter so far. It involves evaluating the applicant in a specific way (section 4.2), and using the appropriate discourse that convinces the readers of the reviewer’s authority within the scientific community and commitment to the community (sections 4.3.2.1 and 4.3.2.2, respectively). In this section, I address the overall persuasiveness of the reviewers’ reports: how they align their readers by expanding, contracting or excluding the dialogic space in the text, thus entering into a negotiation between the reviewers’ stance and the naturalised readers’ stance.

Anticipation of and negotiation with the potential readers’ possible opinions and stance is the key to a successfully persuasive text. Not only does the reviewer have to take into account the general values of the scientific community, but he/she also has to bear in mind the purpose of the reports, the reading positions of the NRF Assessment Panel (i.e. what they intend to ‘get out’ of the reports) and the stance he/she want the readers to adopt. Consider the following examples:

- *There are perhaps not as many conference presentations and key note addresses as one might expect* (Double-coding: evoked negative Tenacity and Valuation, downscaled number, Denial/Entertainment, deference politeness)...*However, this should not be interpreted negatively* (positive Reaction, Counter/ objective Pronouncement, deference politeness) *Conferences cost money and represent time away from the laboratory* (evoked negative Capacity, Endorsement) *and I doubt very much that \*\*\*\* could maintain his present productivity and attend more conferences* (Double-coding: inscribed positive Tenacity, invoked negative Capacity, upscaled process, subjective Pronouncement, deference politeness) (101; 22-27);
- *Some younger scientists might think* (Entertainment/ Acknowledgement, deference politeness)– *being influenced by the American way-of-science – that only publications in Nature, Science, Cell or similar journals are “of value”* (Double-coding: evoked negative Reaction of the other scientists, inscribed positive Valuation of the journals, subjective Pronouncement/Distance, deference politeness); *however* (Counter), *in the field of solid*

*state-of-the-art* (positive Valuation) *human and mammalian physiology, the above mentioned journals* *represent* the *top ones* (positive Valuation, Endorsement) (12; 22- 25);

- *Is she a good researcher?* (Entertainment (of) positive Valuation) *Perhaps she could be* (Reaction, Entertainment, deference politeness), *but* (Counter) *it is nearly impossible to tell at this point* (Reaction, softened Focus, Entertainment, deference politeness). *Is she a valuable asset?* (Entertainment) *Absolutely* (Double-coding: inscribed positive Reaction, invoked positive Valuation, solidarity politeness), and *I think it is important to keep her engaged in science* (Double-coding: inscribed positive Reaction, invoked positive Valuation, subjective Pronouncement, deference politeness) (8; 184-186).

Rather than attempt to provide an ‘across the board’ generalisation of the various techniques used by reviewers, I think it is more revealing to focus on these examples, taken from reports for a B1, A1 and Y1 rated researcher, respectively. In the first example, the reviewer begins with a criticism which is made tentatively (through the use of Entertainment and deference politeness) and the effect is to open up the dialogic space. The naturalised reader is construed as possibly expecting more conference presentations and interpreting negatively the applicant’s documentation. The reviewer then counters this anticipated stance (*however*) and provides some ‘expert evidence’ as to why this stance is perhaps inappropriate or misconceived. The personal investment by the reviewer (subjective Pronouncement, deference politeness) contracts this dialogic space and positions the readers, in a non-threatening, non-confrontational way, such that they are persuaded to turn from their anticipated initial stance and adopt the reviewer’s.

In the second example, notably for an A1 rated applicant, the reviewer appears to anticipate some ignorance on the part of the readers. Very strategic attention to the negative face of the readers is apparent in this example. Firstly, the ignorance is attributed to *younger scientists*, but because younger scientists are unlikely to be members of the NRF Assessment Panel, the reviewer seems to anticipate that the readers might think the same way. Secondly, the reviewer ‘excuses’ this ignorance by suggesting that it is the influence of the *American way-of-science* and uses deference politeness (*only* and *“of value”*) in order to avoid the very threatening (and untrue) claim that publications in *Nature* and *Science* are not as valuable as the community perceives them to be. This has, nonetheless, been suggested, however, because it is followed by a Counter (*however*) that indicates an alternative and apparently preferable stance, because this time we see sharp contraction (*represent*) of the dialogic space, and exclusion of any subjective voice. This example plainly shows some of the complex interpersonal techniques required for

positioning readers, indirectly and with respect to some of the evidence or attitudes they may already have.

The third example comes from a report for a Y1 rated researcher. It must be noted that this was the only evaluation of its kind (seriously calling into question the extent to which the applicant is independently established). I have not chosen it because it is necessarily representative of any of the reviewer reports, but because it constitutes something of an ‘imaginary dialogue’ in itself, and is one of the most explicit examples of a reviewer working towards aligning his/her readers. What is especially interesting about this example is that the reviewer presents him/herself as being undecided on his/her own stance, and the readers as in the same position. The fact that I could not assign a positive or negative orientation to some of the instantiations of Attitude (and so settled for ‘undecided’ Reaction) verifies this. By asking open questions, the reviewer is actively involving the readers in the negotiation of stance and throwing open the dialogic space for consideration. The Entertainment strategy is a form of deference politeness, because it avoids telling the reviewers what to think and even grants them the ‘freedom’ to make up their own minds. However, this does not at all mean that the reviewer really is undecided, and wants to readers to make up their own minds. The fact that he/she feels the need to discuss it in this way and invoke the dialogic space for alternatives to *a good researcher* indicates that he/she probably thinks that the applicant is not particularly good. It shouldn’t be *nearly impossible to tell* if the researcher really is good. However, aside from criticising the applicant, this strategy also has the effect of boosting the contractive positive evaluation that follows (*Absolutely*), even if the overall effect is not what the individual researcher might have wished for! The reviewer does still work to protect the ‘assets’ of the community, and it is therefore a show of deference to the readers and community to lead up to a more positive and constructive stance.

On a final note, it is worth remembering that the delicate interplay of evaluation and instruction found in the peer reviewer reports, and reported on in some more detail in this section, is a largely unconscious process. Reviewers are no doubt aware that there is an ‘appropriate’ and ‘inappropriate’ way to assess one’s peers, and that one has to be assertive in order to establish one’s own opinion amongst a possible myriad of conflicting opinions. However, exactly how they attend to the variety of possible audiences, and navigate their readers through these stances towards their own can only become truly apparent on close analysis. The beauty of the analysis in this section is that it reveals the many interrelated strategies at work, and how they combine

and separate with subtle yet persuasive effects. In the following sections, I focus on the reports for the four rating categories and how the instructive language used distinguishes them from one another. Unfortunately it is not possible to achieve the level of detail found in this section, but it does show that the voice of the reviewers has as much of an impact on the rating awarded as the basic assessment of the applicant and his/her work.

### **4.3.3 Instructing the Individual Rating an Applicant is to Receive**

#### **4.3.3.1 Instructing an A1 Rating**

The most immediately striking feature of the A1 reports is that they appear to construe ‘facts’ rather than ‘opinions’, and that there is very little dialogic space opened up for the negotiation of stance, overall and compared to the reports for the other rating categories. The main reason for this is that there are far more monoglossic evaluations in the A1 reports, compared to the B1, C1 or Y1 reports (78%, compared to 64-67% - see Appendix 1, Table 6.5). Monoglossic evaluations are a way of presenting a stance as one that is not perceived as open to contestation, and projecting a naturalised readership already aligned with the reviewer’s stance (a strongly favourable attitude towards the applicant and his/her work). For example, whereas in the C1 reports one frequently finds evaluations such as:

- *I think that Dr\*\*\*’s research in this area has had a major impact (positive Valuation, upscaled presence, subjective Pronouncement) (4; 226-227),*

where the intervention of the reviewer’s voice (subjective Pronouncement) makes for a heteroglossic evaluation: one where the stance of the reviewer is presented as part of a dialogue with the possibility of alternative voices, in the A1 reports, one more frequently finds evaluations such as:

- *This decision will be of benefit not only for South Africa, but also for the international community of researchers in the field of Thermal Physiology (positive Valuation) (12; 360-361).*

The above example is monoglossic: the reviewer generates no space whatsoever for alternative voices or opinions. This might seem to be a somewhat risky move, particularly in the above example where he/she appears to speak on behalf of the entire community. However, this alone is an indication of the very high standing of the applicant: the reviewer assumes agreement from the readers and thus feels confident enough to make such evaluations without threatening the face of his/her readers. It is therefore unsurprising that fewer politeness strategies are employed in the A1 reports compared to the reports for the other rating categories (see Appendix 1, Table 6.1).

Most of the politeness strategies in the A1 reports are deference politeness (66.4% - see Appendix 1, Table 6.10). Deference politeness is used to avoid threatening the negative face of the readers (the NRF Assessment Panel) and the scientific community (readers naturalised in the discourse). In the A1 reports it most commonly takes the form of depersonalised heteroglossic evaluations which the reviewers construe as being derived from evidence, and thus a matter of logical deduction rather than personal opinion, for example:

- *Prof\*\*\*'s exceptional (positive Valuation, upscaled quality) research speaks for itself with little need for external commentary (positive Valuation, upscaled quality, objective Pronouncement: deference politeness) (100; 12-13);*
- *Many (upscaled number) of the papers are published in high impact journals (positive valuation, upscaled quality), which again indicates that we are dealing with a sound scientist (positive Valuation, sharpened Focus, Endorsement: deference politeness) (12; 211-212).*

Endorsement and objective Pronouncement are contractive and exclude the reviewer's individual voice. They are therefore a subtle means of aligning readers without imposing an evaluation they are expected (or indeed construed) to accept, but also without making the evaluation appear too subjective. The reviewers, after all, do want the readers to align themselves with the stance presented. Where the reviewer's voice is evident in a deference politeness strategy, it is generally subjective Pronouncement, which is still contractive, and is used for very assertive claims that would, conventionally, require some element of subjectivity. This is not necessarily due to any doubt on the part of the reviewer, or even any anticipated disagreement from the readers, but because it is polite to the scientific community not to state objectively who stands where in the hierarchy, as this is likely to be a sensitive topic. So even in the A1 reports one finds deference politeness such as:

- *In my opinion (subjective Pronouncement: deference politeness), \*\*\* is the most outstanding marine biologist of South Africa (positive Valuation, upscaled quality) (100; 323).*

Expansion is also sometimes used as a deference politeness strategy, but any speculation in the A1 reports concerns future possibilities or aspects of the applicant and his/her work that the reviewers do not (or could not) know for certain. The 'lack of knowledge' is not due to any shortcoming on the part of the applicant and the predictions the reviewers make are positive and therefore serve to augment the positive evaluations already provided, for example:

- *I suspect (Entertainment: deference politeness) that his personality is a major source of his great success (positive Valuation, upscaled presence) (100; 91-92).*

Reviewers sometimes evaluate themselves negatively in comparison to the applicant, for example:

- *...my own comparatively very modest output* (Double-coding: invoked positive evaluation of the applicant, inscribed negative Valuation of the reviewer, downscaled quality);
- *The quality of [his work]* (positive Valuation)...*humbles me, a fellow scientist* (Double-coding: evoked positive Reaction of the applicant, negative Reaction of the reviewer).

Self-degradation would appear to be a bold move, as one would expect the reviewers to take every opportunity to prove themselves to be good researchers in their own right. However, it is less likely to be a show of modesty and more likely to be a deference politeness strategy. Apparently the reviewers believe that the applicant is of such high standing that they are not really compromising their own reputations by placing themselves below him/her. On the contrary, it might appear unfounded and arrogant to place themselves on a par with the applicant whom they have construed so very positively. This is clearly instructive in that it provides a reason for the applicant to be given a top rating, without the imposition of telling the readers so directly.

Another even subtler indication of the applicant's esteem is the effort reviewers make (mostly evident in the opening section of the report) to claim an acquaintance with the applicant, something which is not found in the reports for the other rating categories. Reviewers provide specific details of where, when and in what capacity they have worked with the applicant, and some even claim that they have specially taken the time to provide a thorough and detailed report, for example:

- *In order to obtain a better idea of the content of Professor\*\*\*'s more recent scientific output, I have obtained copies of all publications from the years 2003, 2004 and 2005* (Double-coding: self-evaluation of positive Tenacity, upscaled Proximity: time) (12; 195-196).

It would seem that it is in the interests of the reviewers to be able to associate themselves with the applicant, which is another subtle indication of the applicant's eminence. It reflects well on the reviewers and their own networks to be able to say that they have worked with the applicant at some point. One therefore finds many positive double-coded evaluations of both the reviewer and the applicant, for example:

- *We are currently co-authoring a chapter* (Double-coding: evoked positive Tenacity of the applicant and reviewer) *resulting from a meeting...that we were both invited to* (Double-coding: evoked positive Valuation of the applicant and the reviewer) (100; 7-8).

Where there is downscaled Force or negative self-evaluations, a positive evaluation in the form of a justification of explanation often follows, again drawing attention to the reviewer's desire to be seen as a suitable reviewer, for example:

- *I have not collaborated with him, and I do not know him well personally* (negative Capacity, downscaled quality) *I am, however, well familiar with his published work* (Counter, positive Capacity, upscaled quality) on *thermoregulation* (12; 267-269).

One finds that the reviewers for the A1 applicant are generally nearly as enthusiastic about their acquaintance with or knowledge of the applicant as they are of the applicant him/herself. The opening sections of the reports ('Knowledge of the Applicant') are longer for the A1 researcher and constitute a greater proportion of the reports overall, compared to the reports for the other rating categories (see Appendix 1, Table 6.2). Although this section of the report does not require evaluations of the applicant's work and an estimation of his/her standing in the community, reviewers for the A1 applicant often provide some anyway, showing that they are keen to present their stance and talk about the applicant right from the start of the report. This is rare in the reports for the other rating categories. In addition, some reviewers (Reviewers 2, 4 and 5 for Applicant 12, and Reviewers 1, 2 and 3 for Applicant 100) may indicate that they have provided reviewer reports for the applicant for previous assessment periods, or are at least familiar with the rating system. This is significant because it indicates that the very positive evaluations are made with full knowledge of the high stakes involved in the rating system, and the implications of being awarded a top rating (i.e. financial support, enhanced prestige, recognition in community, etc.). Because the ratings function as a benchmark against which other scientists are measured (and this would include the reviewers themselves), it is a telling indicator of an A1 rating that the reviewers place the applicant at the very top of their field, knowing well how this would reflect on their own standings within the community.

#### **4.3.3.2 Instructing a B1 Rating**

As I mentioned in section 4.2.3.2 (Construing the B1 rated researcher), the reports for the B1 rated researcher are, by and large, shorter and less detailed than those for the other rating categories. However, there are far more heteroglossic instantiations of Attitude than in the A1 reports (35.4% compared to 21.5% for the A1 reports - see Appendix 1, Table 6.5), indicating a stronger presence of the reviewers' individual voices. This, and the presence of more dialogic space in the text indicates already slightly more equivocation surrounding the reviewers' estimation of the applicant's standing and the quality and impact of his/her work, compared to the A1 rated researcher. Firstly, however, the reviewers for the B1 rated researcher do not make nearly as much effort to claim an acquaintance with the applicant as those for the A1 researchers, and this can be seen in the occasional rather flippant evaluation such as:

- *I am coauthor of 20 papers a year* (Double-coding: positive Capacity and Valuation of self, upscaled number) - *if I could answer the question of how many times I have cited this researchers multi-authored work I would need to have an incredible memory* (Double-coding: evoked negative Capacity and positive valuation, infused upscaled quality) (22; 165-166).

That a reviewer is prepared to place him/herself in such a high position, possibly above that of the applicant, and show such little interest (although admittedly this is extremely rare) immediately shows that one peer of the applicant, anyway, is not setting out to direct the readers towards an A rating.

The opening section of the B1 reports constitutes the second smallest proportion overall, after the Y1 reports (13% - see Appendix 1, Table 6.2) but considering the relative lengths of the B1 and Y1 reports, the opening paragraphs of the B1 reports are the shortest and least substantial of the opening paragraphs in all of the rating categories. There are also fewer reports graded as ‘excellent’ and more as ‘satisfactory’ compared to the A1 reports. These are indications to the readers that the B1 applicant is not as eminent or well-known as the A1 rated researcher. There are also more negative self-evaluations in the opening section, which are not followed up extensively by more positive ones, for example the full opening section of one of the reports is as follows:

- *I have never met \*\*\*, nor have I heard him speak at a conference* (evoked negative Capacity). *I have read or referred to much of his research* (Double-coding: evoked positive Capacity and Valuation) *on reproductive physiology and chronobiology* (101; 66-67).

There are also virtually no ‘additional evaluations’ belonging in sections 2 and 3 of the reports which so frequently spill into the opening section of the A1 reports.

Unlike the A1 applicant, construed as a ‘perfect scientist’, there are some criticisms of the B1 applicant, for example:

- *I think* (subjective Pronouncement, deference politeness) *the quality is generally very high* (positive Valuation, upscaled quality, softened Focus), *but probably not earth-shattering* (Counter/Entertainment, negative Valuation, figurative downscaled quality, deference politeness) (22; 171-172);
- *I would expect* (Entertainment, deference politeness) *to see a top-class researcher demonstrating that he/she is providing the intellectual driving force* (Double-coding: evoked positive Capacity and negative Tenacity) *for the laboratory's work by being first author on rather more papers* (Double-coding: evoked positive Capacity and negative Tenacity, upscaled number, softened Focus, deference politeness) *than \*\*\*\* has demonstrated* (101; 376-377);
- *\*\*\* does tend to publish a little too frequently in [these journals]* (negative Tenacity, downscaled process, upscaled Distribution (time), softened Focus, deference politeness) (16; 163-164).

These examples are more or less representative of the types of criticisms one expects to find in a suite of B1 reports. The role of Graduation as well as expansive heteroglossia in expressions of deference politeness is evident in the above examples. Downscaled Force and softened Focus function in much the same way as Entertainment: they make evaluations less definitive and more tentative. A researcher rated in the B1 rating category, despite being lower in standing than the A1 rated researcher, is still highly accomplished and esteemed. Thus it is more appropriate (and more convincing for the readers) for such criticisms to be made politely as they are very likely to meet some opposition or alternative interpretations. Solidarity politeness is less prevalent in the B1 reports than it is in the A1 reports. Reviewers do not assume as much shared knowledge or attitudes. However, sometimes the effect of its use indicates a reviewer at a lower level than the A1 researcher, for example:

- *\*\*\*'s national standing is clearly high* (positive Valuation, Affirmation, solidarity politeness) (101; 155);
- *Whilst Dr \*\*\*\* is undoubtedly well known internationally* (positive Valuation, Affirmation, solidarity politeness), *I doubt* (Concede, subjective Pronouncement, deference politeness) *whether this is as much for his ground-breaking contributions to biology, as it is for his consistent, good quality research outputs* (positive Valuation) (101; 271-272).

The fact that the first evaluation is heteroglossic at all, creating dialogic space, even if it is then to contract it, is not as strong as the monoglossic evaluations found in the A1 reports. In the second example, the focus on shared attitudes gives way to a very subtle negative evaluation of the applicant, which can be understood only when attention is paid to the Concessions (*Whilst...I doubt/ as much for...as it is for...*) as it is a positive evaluation of the applicant's work that follows. This is another indication that reviewers align their readers rather more indirectly and politely than they do for lower-ranked researchers and with a consistent shift back to the positive aspects of the applicant's career.

Finally, it is worth noting that genuine uncertainty on the part of the reviewers concerning some aspect of the applicant's work or standing is more common in the B1 reports than in the reports for the other rating categories. More importantly, it often has the effect of indicating that the reviewer is not the reliable authority concerning a particular evaluation that he/she is for the rest of the report, for example:

- *I am not qualified to rate his standing amongst physiologists/endocrinologists* (evoked negative Capacity), *but I would guess that his work on the hormonal basis of reproductive suppression is well known* (positive Valuation, Counter, Entertainment, deference politeness ) (101; 138-139);
- *I must quickly say* (Entertainment, deference politeness) *that here I am being highly 'picky' and perhaps riding a personal hobby-horse* (negative Normality, upscaled process, Entertainment, deference politeness) *about biologists who may be more concerned* (upscaled quality, Entertainment, deference politeness) *with the natural*

*history of a species than about fundamental biological questions. ... and \*\*\*\*'s book undoubtedly covers a wealth of fundamental biological information in the context of the biology of the species* (positive Valuation, upscaled quality and presence, Affirmation, solidarity politeness) (101; 386-389).

Rather than present an unreliable stance, reviewers draw attention to their deficits so that for a certain evaluation they do not align the readers too strongly and misrepresent the overall stance the reviewer is aiming to present, or the reliability of the report. The fact that there is rather more expansive heteroglossia in the B1 reports than in the reports for the other rating categories, and that, naturally, no reviewer would have any wish to self-criticise or really construe him/herself negatively, lends credence to the emphasis on deference politeness.

In the reports for the B1 researchers, the instructive language seems to be rather like the evaluative language: showing some characteristics of the top rated researchers and the lower rated researchers. The fact that the reports seem rather unremarkable in that they neither push for a very high rating nor a lower one is also, in itself, a way of instructing a middle rating.

#### **4.3.3.3 Instructing a C1 Rating**

In the reports for the C1 rated researchers, there are still fewer reviewers very well acquainted with the applicants and their work than one finds in the A1 and B1 reports, and fewer reports graded as 'excellent' (see Appendix 2, Table 6.13). The opening sections constitute the smallest proportion of the reports overall for the C1 rated researchers (12% - Appendix 1, see Tale 6.2), and negative self-evaluations can indirectly indicate to the readers that the applicant is of a lower standing, for example:

- *I am familiar with \*\*\*\* only by reputation (evoked positive Capacity, downscaled quality)... I have seen \*\*\*\*\* or his colleagues present material (evoked positive Capacity) *that is part of the body of his professional effort.... I have not cited his work (evoked negative Reaction and Valuation) because our areas of research and clinical publication do not overlap (evoked negative Capacity) (102; 263-266).**

Like the B1 reports, there is more heteroglossia in the C1 reports than is found in the A1 reports, creating more dialogic space (see Appendix 1, Table 6.5). The effect is slightly less 'factual' and more 'subjective' evaluations of the applicant. For an applicant of lower standing, somewhat conflicting attitudes towards him/her held by the readers and others in the scientific community are expected or anticipated by the reviewers. Effective alignment therefore requires that the reviewers take this into account, hence the more appropriate presence of dialogic space as an alternative to monoglossia.

An indication of the more varied attitudes towards the C1 applicant is that there are noticeably more negative evaluations in the C1 reports, and more advice is provided. Like the B1 reports, these negative evaluations generally concern the standing of the applicant or the overall impact of his/her work. However, in addition, there is an occasional criticism of the work itself, which is more characteristic of the Y1 reports, and possibly an indication of a C rating rather than a B rating. As I have shown in previous sections, an evaluation potentially face-threatening to the readers and the scientific community requires the careful use of Engagement and politeness strategies. Because the C1 applicant is of lower standing than the B1 applicant, it is less face-threatening to the community and more important for the reviewers if they present their stance persuasively, to align the readers more closely with regard to some of the negative evaluations, as these play an important role in distinguishing between researchers rated in the different categories. For example:

- *I do not want to detract in any way my strong and positive comments* (Double-coding: inscribed positive Valuation, invoked positive Reaction) *expressed above, but I would like to comment briefly* (Denial/Counter, downscaled process) *on a few* (downscaled number, deference politeness) *aspects of Dr. \*\*\*'s papers that I found a bit weak* (negative Valuation, downscaled quality, subjective Pronouncement, deference politeness). *I find that* (subjective Pronouncement, deference politeness) *the data relating to various disciplines to be very weak* (negative Valuation, upscaled quality), *in regard to both the data presented and the description of the methods involved* (negative Composition)... (3; 212-219).

The above example is an extract from a passage that provides, (anything but 'briefly') very specific details about the papers and what the reviewer perceives to be problematic about them. It seems that the reviewer's aim is to make a criticism within the conventions of the discourse (i.e. one that is tentative and unimposing), that does not damage the overall assessment too significantly, but which does demand some attention from the readers. The deference politeness strategies therefore 'validate' the presence of negative evaluations and protect the upscaled, less tentative criticisms (i.e. *very weak*).

As one would expect, providing advice or justifications/excuses for some of the applicant's shortcomings is found to a greater extent in the C1 reports than in the B1 reports. As I have shown already (see section 4.3.3.2 and section 4.3.2.1 for examples) these can be interpreted as deference politeness strategies in themselves, and are important for validating the reviewer's authority as an 'expert', showing respect to the conventions of the discourse and the values of the community, and positioning the readers such that they adopt the reviewer's stance. This is also important for the NRF Assessment Panel, as they require that the reviewers 'instruct' them to allocate a certain rating (hence why the NRF rating system is based on peer assessment, not

NRF assessment). Instructive language in the C1 reports is therefore very similar to that used in the B1 reports (see previous section), but with more criticisms, and fewer positive, upscaled evaluations, we see the reviewers instructing a rating at a lower category.

#### 4.3.3.4 Instructing a Y1 Rating

The Y1 rated researcher, as I have said (section 4.2.3.4) is something of a ‘special case’. In the A1, B1 and C1 categories we have researchers judged according to the same basic criteria (see section 4.2.3) and rated according to how far these criteria are met (see Appendix 6). For the Y1 category, the criteria are slightly different, as they take into consideration the applicant’s limited experience as a researcher and limited time spent working in the field. So on one hand, the language used ‘instructs’ readers to see the Y1 applicant as being at a lower level than the A1, B1 and C1 rated applicants, very much like what we have seen in the previous two sections. On the other hand, it is not simply a case of decreasing positive evaluations, and lessened interest in the applicant. Whereas the more established researchers represent the scientific community for what it is, the Y1 researchers represent what it could be in the future. The Y1 researcher, holding an NRF rating, clearly then represents something positive for the community, and so despite the criticisms reviewers make, readers are generally directed towards the positive evaluations of the applicant’s potential (which is not found as emphatically in the reports for the A1, B1 and C1 applicants).

Some of the more indirect indications that the reviewers are placing the Y1 applicant at a lower level than the others include: the fact that it is not always possible even to obtain one ‘excellent’ review (for Applicant 4, for example), and that some of the reviewers are more senior researchers such as former supervisors or external examiners. Rather than jumping at the opportunity to write a report and claim an acquaintance with the applicant (such as one sees for the A1 rated researchers), there are slightly more instances of disinterest, for example:

- *I do not know Dr. \*\*\* personally, and I do not recollect having heard her talk* (evoked negative Capacity), *but I have interacted with her concerning her participation in a symposium that I am organizing* (positive Capacity)... Please note that *I did not solicit her participation, rather, her colleague and Ph.D. advisor Dr. M suggested that I ask her* (Denial/Counter, deference politeness, evoked negative Reaction) (4; 95-98).

I think anyone involved in academic research in general will have found, at some point, that for more accomplished researchers (which some of the Y1 reviewers appear to be), self-interest can override serious attention to the younger, less experienced researchers. Such is the nature of the tension between being an ‘authority’ and being a ‘servant’.

As I have also mentioned, because the Y1 applicants represent the best of the younger generation, reviewers do want them to be recognised and rewarded by the NRF, and so there is considerable interaction and negotiation with the readers overall. One finds more instantiations of Engagement (17% of all APPRAISAL instantiations, compared to 15% in the B1 reports and 11% in the A1 reports – see Appendix 1, Table 6.1) and politeness (15% compared to 10% in the C1 reports, 11% in the B1 reports and 8% in the A1 reports – see Appendix 1, Table 6.1) in the Y1 reports than the reports for the other rating categories, indicating more dialogic space and the reviewers’ individual voices in the text. Significantly there are far more Disclaimers (i.e. Denials and Counters) in the Y1 reports than there are in the A1, B1, C1 and Y1 reports (see Appendix 1, Table 6.9). This signifies greater emphasis on alignment strategies that involve presenting an anticipated stance of the readers, or perhaps even the reviewer him/herself, and then replacing it with an alternative stance. It involves acknowledging then rebutting expectations, which itself embodies a negotiation concerning basic concepts of what constitutes good science, an established researcher, the ‘right’ way to go about becoming recognised within the community, etc. Consider the following examples:

- *These papers have caused scientists in the field to rethink their ideas (evoked positive Valuation)... However (Counter), I do find (subjective Pronouncement, deference politeness) the group's interpretation...somewhat one sided (Double-coding: inscribed negative Composition, invoked negative Valuation, softened Focus) and even evangelically opposed (Double-coding: negative Reaction and Valuation, sharpened Focus, Entertainment, deference politeness) to the views that many others have expressed (upscaled number). Again, perhaps (Entertainment, deference politeness) this approach is coloured by Dr. M's very strong, often even dogmatic opinions on the subject (Double-coding: negative Tenacity of Dr. M, negative Valuation of his opinions, upscaled quality, Entertainment, deference politeness) and his influence (evoked negative Valuation) on his research group (4; 123-127);*
- Even though she may not be ranked as one of the top researchers amongst her peers (Counter, negative Valuation, upscaled presence, Entertainment, deference politeness), I believe that (subjective Pronouncement) she has the potential to become an established researcher (positive Capacity) who will make an outstanding contribution in science in South Africa (positive Valuation, upscaled quality) (7; 35-37).

In the first example above, the counter-evaluation shifts the negative evaluation of the applicant’s work to the supervisor, Dr. M.. The readers are then positioned to view a possible weakness of the applicant’s work as a weakness of the community: the applicant has been ‘failed’ by the more senior researcher. Intellectual argumentation concerning ‘accepted knowledge’ is as much a value of the scientific community as nurturing younger scientists, so it is not necessarily inappropriate to criticise the supervisor’s opinions and provide them as a reason for the applicant’s shortcomings. In the second example, the Counter-subjective

Pronouncement combination can also be seen as a Concession, where the acknowledged negative evaluation is then ‘disclaimed’ in favour of a positive evaluation, focussing on the potential of the applicant, which is ‘proclaimed’.

The above examples show that ‘instructive’ linguistic strategies are essentially the same in the Y1 reports as they are in the A1, B1 and C1 reports. They are used to direct the readers to different conclusions regarding the applicant’s standing. This is a useful reminder that although evaluation and instruction can be divided and analysed separately (as they have in this chapter), it is the way in which they co-function that generates interpersonal meanings and exchange between reader and writer in the text.

#### **4.4 Conclusion**

In section 4.3, I have focussed on instructive language in the peer reviewer reports, and how it functions to protect and maintain the values of the scientific community, and the roles of individuals within it. I have also shown how instructive language functions together with more explicitly evaluative language to negotiate stance within the reports, and direct readers towards awarding specific ratings to the different applicants. In section 4.2, I focused on evaluative language in the peer reviewer reports, and how it construes a particular representation of the applicant, which is then matched to the NRF criteria for each rating category (see Appendix 6) in order to allocate a rating. As I mentioned in the introduction to this chapter, further summaries of the research findings can be found in Appendices 1-3 (in this volume). I have referred to the quantitative summary in Appendix 1 repeatedly throughout this chapter in order to complement the analysis. In Appendix 2, I focus on every category under Attitude, Graduation, Engagement and Politeness as well as some more general features of the reports useful for distinguishing them from one another. Because my reporting of the data (sections 4.2 and 4.3) is structured around the broader interpersonal meanings generated in the reports, rather than the rating categories or the APPRAISAL categories, some more delicate differences between the reports in each rating category in terms of how these meanings are expressed is inevitably lost. The point of carrying out such a fine-grained analysis, however, is to capture such detail when it is perhaps less than obvious. This section contains the most explicit comparison between the reports for each rating category, based on the results of the APPRAISAL Analysis. In Appendix 3, the focus moves from the many APPRAISAL categories to the features found in the reports for each rating category. This Appendix is designed to be more accessible to non-linguists or those who are not well-acquainted with the large and complex framework

employed, for example a member of the NRF Assessment Panel, responsible for allocating a rating based on the reports in hand. Whereas in Appendix 2, the entry point is the system categories, the entry point for this section is the meanings (evaluation and instruction combined) in the reports for a certain rating category. This is probably the closest representation of how we would read the reports and therefore presents the results of the analysis in a more reader-oriented and less analyst-oriented way. The following chapter, Chapter 5, concludes this thesis.

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## 5.1 Introduction

In this chapter, I provide a summary of the main findings of my research and return to the research questions (c.f. section 1.2) to show how my findings provide the information and insights necessary for answering them (section 5.2). In sections 5.3 and 5.4, I consider the relevance and value of the study from both a theoretical and applied perspective, and in section 5.5, I point to some of the limitations of the research, and the areas for further research it identifies.

## 5.2 Summary of the Main Findings

The objective of this research is to answer four research questions which are provided in Chapter 1 (section 1.2) and are reiterated here, together with a summary of the answers provided for each.

1. *Is there a relationship between the types of evaluative language used in the reports, and the rating allocated? In other words, how are the NRF Assessment Panel's final decisions regarding ratings based on the ways in which reviewers' evaluate the applicant, the quality of his/her research, and standing in the field?*

The APPRAISAL Analysis, and specifically the attention paid to evaluative language in the reports (discussed in section 4.2) shows that there are indeed differences in the ways the applicants in the different rating categories are evaluated. In all the reports, there is a predominance of Appreciation, particularly Valuation (an assessment of the worth of 'things') followed by Judgement, particularly Social Esteem (assessments of human qualities and behaviour). The majority of the evaluations are positive and address a variety of aspects of the applicants' work and career. The relative differences in the standing of the applicants rated in the A1, B1, C1 and Y1 categories can be seen primarily in the prevalence of negative evaluation in the reports for each rating category. Whereas the A1 applicant is evaluated as 'perfect' and there are no criticisms whatsoever, one finds an increasing incidence of negative evaluations in the B1, C1 and Y1 reports. The variety of evaluations and the resources for grading them (i.e. Graduation) can also distinguish between the different rating categories, with the richest and most intense evaluations being those for the researchers in the top categories, and the more limited and restrained evaluations being for those in the lower categories.

2. *How is evaluative language used in reports to instruct the readers and position them in such a way that they make specific judgements concerning the researcher's personal qualities, the quality of his/her research, and the standing of the researcher in the relevant field?*

The APPRAISAL Analysis, together with an analysis of solidarity and deference politeness in the reports shows that the reviewers for all the rating categories employ particular strategies for performing a number of interpersonal functions (this is discussed in section 4.3). These include: persuading their readers that they are suitable reviewers and are providing a reliable assessment report, positioning and aligning the readers in a non-threatening, non-confrontational way such that they adopt the reviewers' stance, and evaluating the applicant in a way that conforms to the norms of this type of scientific discourse and protects the values of the scientific community. Like the more explicitly evaluative language, the instructive language can also distinguish between reports for different rating categories. In the higher categories, reviewers are less tentative and more committed to the evaluations they make, and they employ fewer dialogic strategies (such as heteroglossia and politeness strategies) resulting in a less overt presence of the authorial voice in the text. In the reports for the lower rating categories, the reviewers perceive more contention concerning their evaluations of the applicant, and so there is more intervention of the authorial voice in the text, more heteroglossia and politeness strategies, and more overt dialogism. There is more negotiation of stance, as opposed to presentation of stance.

3. *To what extent can descriptions of evaluative and instructive language be used to assess the efficacy and consistency of the decisions made by the NRF Assessment Panel?*

The fact that my investigation of evaluative and instructive language reveals clear differences between the reports for the different rating categories, immediately provides some linguistic 'evidence' substantiating the ratings the NRF allocated to the applicants whose reports I analysed. In addition, correlation between my analysis and the NRF criteria for researchers rated in the different categories makes explicit the bases of the apparently intuitive judgements made by the NRF Assessment Panel when assigning ratings (this is discussed in section 1.4). It shows that the subtle differences in the strategies reviewers use to evaluate the applicants in the different categories play as much of a role in directing the panel's decisions as the basic content of the reports i.e. examining both *what* the reviewers say and *how* they say it can be useful when comparing the reports for an individual researcher with the rating allocated.

4. *What can the linguistic strategies used by reviewers tell us about the negotiation and preservation of the identity of the scientific community, its values, and interpersonal relations?*

I approached answering this research question in a variety of ways. Firstly, I examined what the reviewers perceive (as construed in the evaluative aspect of the reports) as being a 'good

scientist' and 'good science', what they rate as positive about the applicants, and what they rate negatively. This tells us what is valued by the scientific community. Chapter 2, section 4.3, and Appendix 3, Table 6.18 outline the various attributes a rated researcher is expected to have, such as: a substantial, high quality, wide impact, and well cited body of research outputs that is also original, and elegant, and published in top international journals. The rated researcher must also be an effective collaborator and a competent teacher with outstanding personal qualities such as integrity, humility, enthusiasm, leadership skills and productivity. Importantly, the researcher must also be at the top, if not the very top of his/her field of research. Secondly, by integrating APPRAISAL and politeness strategies, and interpreting their use in the light of the existing literature on scientific discourse and the values of the scientific community, I have shown that there are specific conventions of the genre that function to construe and maintain the scientific community as a 'discourse community'. Some of these conventions include: hedging and making criticisms more polite, making more polite any evaluation potentially threatening to the readers or the scientific community in general, construing a naturalised readership which is stanced, and making all evaluations with respect to this anticipated stance. The multiple roles reviewers take on i.e. as an authority within the community, a servant of the discipline, and a persuader, serve to protect the scientific community (and thus its interests too) by conforming to these conventions (see section 4.3.2).

In the following sections, I explain the contribution this research makes to our understanding of the NRF rating system and to the existing literature on APPRAISAL and scientific discourse

### **5.3 Relevance of the Research for the NRF Rating System**

In section 1.4, I characterise the NRF rating system as an 'evidence-based' approach to rating researchers, which involves the combination of 'objective' evidence (such as the documentation submitted by an individual applicant detailing lists of publications, teaching record, etc.) and 'subjective' evidence (the 'expert opinion' of the reviewers). Subjective evidence from the experts is given heavy priority because it interprets the objective evidence in the light of the culture and community in which it was produced. That evidence-based approaches take into account the somewhat ideological nature of what we view as 'good' evidence is a strength but also a weakness, as it then leads to contention concerning who is the most appropriate 'expert' and how this expert can prove him/herself as such. I also mention in section 1.4 that the NRF seeks to address this potential problem by sourcing reviewer reports from those best placed to provide them: those most familiar with the applicants and their work, as well as the scientific community of which the applicant is a member.

In reporting on my analysis, I show how reviewers establish their authority as an ‘expert’, not only in the opening section of the report (Knowledge of the applicant), but throughout the reports, and in more subtle ways, for example: pointing out the applicant’s weaknesses, providing advice, suggestions or recommendations, comparing the applicant to others in the field, or comparing the applicant’s research to their own. By conforming to the norms of the discourse and particularly by using deference politeness strategies that indicate consideration of the readers’ motivations and possible stances, the reviewers establish themselves as members of the same scientific community, which also substantiates their role as the expert. Thus my research provides additional ways of discerning what are the most useful reports, and the most suitable ‘evidence’ of the rating an applicant should receive

It may seem somewhat circular to assume that the reports for the applicants and the ratings awarded that have been the focus of this research, are ‘perfect’ examples of reliably allocated ratings that correctly reflect the applicants’ standings, and which can then serve as the basis for a description of the genre, and a benchmark against which the reliability of other ratings can be compared. It is not impossible (or even infrequent) that applicants disagree with their rating and choose to appeal against it. However, I believe that my research is more useful than may be immediately apparent in addressing this potential problem. Firstly, it does not bring to light any seriously anomalous instances of a suite of reports being unlike. Two suites of reports for the A1 rating category and three suites for the B1, C1 and Y1 rating categories is a fairly sizeable amount of data. My analysis reveals distinct differences between the reports for each rating category, and distinct similarities amongst the reports for each rating category. In this respect, my analysis has been able to stratify the applicants in terms of their eminence and accomplishments and distinguish between those at the very top, and those in the lower categories. This alone suggests that the relative standings of the applicants were correctly estimated, and correlation with the NRF criteria for each rating category supports the assumption that the ratings were allocated correctly and reliably, based on the reviewer reports. Secondly, the NRF rating system, when allocating ratings, is not able to tap into any inherent and objective ‘truth’ about the standing of the applicant, hence why it needs to take an evidence-based approach. If an individual applicant is unconvinced by the accuracy of the rating he/she receives then, the NRF would argue (and my analysis would support this), the ‘inaccuracy’ lies with the applicant’s peers who provided the reports, not the NRF. This also supports my argument that the reviewer reports are fundamental to the rating system, and that the applications provided by the applicants are unnecessary for this research or the NRF Rating Panel when assigning ratings.

The value of this research for understanding how the NRF rating system works lies in a number of additional insights it reveals. Firstly, as I mentioned earlier in this section, it shows additional ways in which reviewers can prove their suitability to the task of providing the best evidence of an applicant's standing. Secondly, the APPRAISAL Analysis reveals a detailed description of the types of evaluations that are found in all the reports, as well as those which can distinguish the reports from one another. Thirdly, differences in the ways reviewers choose to criticise or draw attention to the weaknesses of the applicants in the different rating categories provide additional information about their relative standings. This aspect of the reports is far more subtle than the rather more straightforward evaluations, and although it is probably intuited when reading the reports, its effectiveness in the reports and instructing the readers can only be fully understood through an analysis such as this. Some of the alignment strategies my analysis reveals, and how they work in combination with the evaluations of the applicant (see section 4.3.2.3) can be understood in the context of the scientific community and the multiple functions the discourse has developed to fulfil. Appendix 2 is a detailed comparison of the reports for each rating category in terms of the different APPRAISAL categories and politeness strategies. Appendix 3 provides a comparison of the general features of the reports for each rating category, and is designed to be accessible to members of the NRF Assessment Panel, and possible function as a guideline for them when allocating ratings.

#### **5.4 Relevance of the Research for Work on APPRAISAL and Scientific Discourse**

This research has involved a complex, multi-perspective analysis which not only utilises the full APPRAISAL Framework, but also includes some modifications of my own and an additional dimension, politeness strategies, aimed at complementing our understanding of the multiple roles that are taken on by writers in order to engage their readers in dialogue and align with a particular stance. This research has also focussed on a type of scientific discourse that has not, until now, received any attention in the literature on the language of science. In this section, I briefly discuss some of the additional insights my analysis provides into these two areas of research.

APPRAISAL Analysis, which has developed and expanded over the past twenty years or so is still being refined and modified by discourse analysts, most of them focussing on parts of the system rather than on how the full system works: i.e. Attitude, Graduation and Engagement together. This analysis therefore represents something rare, even unique, for APPRAISAL, because it utilises the full framework. The incorporation of politeness strategies adds an additional dimension to the analysis, which I believe has the potential to lead to insights on interpersonal meanings beyond what is reported on in this thesis. Face-saving strategies are not simply a way of maintaining

working interpersonal relationships in texts, and they are not only mechanisms for aligning readers. My analysis suggests that they are also a way of construing discourse communities. Although I have used Scollon & Scollon's (1983) and Myer's (1989) distinction between 'solidarity' and 'deference' politeness, they can both be seen as mechanisms for indicating and establishing in-group membership, and thus construing communities through solidarity, as opposed to hegemony. Although in this research, I focus mainly on the role of politeness strategies in the light of reader alignment and persuasion, I note their potential to tell us more about the development and maintenance of discourse communities in general.

An analysis of the peer reviewer reports also represents something unique for studies on scientific discourse. In section 2.4.5, I argue that the reports are a type of scientific discourse, but one which most consciously and definitively establishes the norms, values, conventions and boundaries of the research community, and the expectations individual members and aspiring members have of one another. The peer reviewer reports therefore most explicitly reveal the interpersonal nature of producing scientific knowledge, and the fundamental importance of interpersonal meanings for discourse communities and the genesis of cultures, genres and specific representations and interpretations of the world and our communities.

## **5.5 Limitations of the Study and Suggestions for Further Research**

It appears the larger, more complex and more wide-ranging an analysis, the more limitations and directions for future research it reveals. In this section, I provide some of the most obvious limitations of the research, as well as some of the directions for further research it prompts.

Firstly, some of the limitations:

1. The analysis is of reports from only one discipline, Animal and Veterinary Sciences. The NRF rating system is far wider in its scope than this, and includes ratings from researchers in the social sciences and the humanities (see section 3.2.1 for a full list) in addition to the natural sciences. Because these constitute different discourse communities, one would expect some differences in the evaluative and instructive language used.
2. The analysis focuses on only four of a possible dozen rating categories. It does not address ratings within the main rating bands (i.e. A2, B2, B3, etc.) or additional categories such as the L category (see Appendix 6 for details of these categories).
3. I have argued that an analysis of the documentation submitted to the NRF Evaluation Centre by individual reviewers, and sent out to reviewers to assist in their evaluations,

is unnecessary for this research and the research questions posed. However, because reviewers are cued in their evaluations by this documentation (details of the applicant's career and a self-appraisal - see Appendix 4), they could provide further insights into the context in which the reviewer reports are produced.

4. From a theoretical perspective, although the APPRAISAL analysis includes my own modifications and extensions, it has not been feasible to provide an explicit critique of the framework.
5. Finally, a more detailed investigation of research in pragmatics (such as politeness) and how it can work together with functional perspectives has been beyond the scope of this research.
6. There was no information provided for this research concerning which reviewers are first-language English speakers and which are not. The fact that so many of the reviewers are sourced from abroad suggests that many might be second language speakers. The influence of their first languages, and their proficiency in English could influence their language choices and be potentially misleading for the analysis. Although I did not encounter any instances where this appeared to be problematic, it needs to be recognised as a possible additional variable that this research has not taken into account.

These limitations suggest a variety of possibilities for further research, such as:

1. An analysis of reviewer reports for applicants in other disciplines (such as the humanities, engineering, etc.) would lead to insights into the conventions and values of discourse communities other than the Animal and Veterinary Sciences, and could serve usefully as a comparison with the findings of the research reported in this thesis.
2. An analysis of the reports for applicants rated in the different categories within the different rating bands (e.g. the B1, B2 and B3) would bring to bear even more subtle differences in the evaluative and instructive language used in the reports than is found in the reports for the top of each rating band.
3. A comparison of the applicant's self-evaluations and the reviewers' evaluations of the applicant, could provide an additional perspective on the conventions of scientific discourse (how scientists talk about themselves as opposed to how they talk about one another) that is not addressed in this thesis.
4. An analysis of reports for applicants who later appealed against their ratings, together with the motivation for the appeal, could investigate the extent to which the

contention is a consequence of the evaluative and instructive language used in the peer reviewer reports, and the individual applicant's documentation.

5. A more focussed investigation on the efficacy of the APPRAISAL Framework, addressing how specific aspects of the system interact (such as polyphonic APPRAISAL) would provide a more nuanced investigation of the role of APPRAISAL in the data.
6. An analysis that focuses on specific themes in the reports, particularly those which involve strategic interpersonal choices and intervention of the authorial voice (such as criticisms or providing advice) would allow for a more focussed and nuanced investigation of how instructive language works in the reports.

## **5.6 Conclusion**

The NRF rating system, and its importance for individual researchers, their research communities and research in South Africa, has resulted in a great deal of discussion and debate concerning the system's usefulness and efficacy. Little of this debate has centred on the validity of the system, which is seen as credible and internationally recognised. While the fundamental importance of the peer reviewer reports is acknowledged, the language choices reviewers make and the specific linguistic strategies they employ in order to establish their suitability as a reviewer, align their readers, and represent the applicant through their evaluations, is largely taken for granted or interpreted intuitively rather than analytically. My research, in making explicit these linguistic strategies, has also made explicit how the rating system itself works. A functional approach to the analysis highlights the essential role of interpersonal meanings not only for the rating system, but for the scientific community. Generating scientific knowledge is widely recognised in the literature as a collaborative endeavour that depends as much on the discourse conventions as the empirical findings. This research has shown that the interpersonal nature of this discourse is fundamental to the genesis of these conventions, as well as defining and maintaining the community and advancing our knowledge of science. A functional approach also shows us that texts are not simply words and grammatical structures, and they do not simply convey information: they create meanings beyond the text, they create cultures, communities and knowledge and, in the case of this research, they can instigate nation-building and instil values that contribute to a better South Africa.

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**Appendix 1 Tables 6.1 - 6.12. Quantitative summary of Tables 6.23 - 6.66**

**Table 6.1 Total Number of Reports, and Average Number of Instantiations per Report in the Reports for Each Rating Category**

Rating Category	Total number of reports	Average number of instantiations per report				Total
		Attitude	Graduation	Engagement	Politeness	
A1	15	55	38	11	8	112
B1	22	50	28	15	11	104
C1	19	57	24	17	10	108
Y1	20	52	22	17	15	106

**Table 6.2 Average Length of the Reports and Proportion (as Percentages) Constituted by the First Paragraph (Knowledge of the Applicant) of the Reports for Each Rating Category**

Rating Category	Average length of reports	Proportion constituted by the opening paragraph (%)
A1	700 words	20
B1	542 words	13
C1	704 words	16
Y1	602 words	12

**Table 6.3 Proportional Distribution (as Percentages) of the Different Types of Attitude for Each Rating Category**

Rating Category	Affect	Normality	Capacity	Tenacity	Propriety	Veracity	Reaction	Composition	Valuation	Total (%)
A1	0.1	3.6	17.8	12	1.7	0.1	16.2	3	45.5	100
B1	0.1	2.3	17	15	0.5	0.1	13.8	1.9	49.3	100
C1	0	3.4	15.1	14.1	2.3	0.8	13.6	1.2	49.5	100
Y1	0.2	3.4	14.2	13.3	1.5	0.2	16.6	2	48.6	100

**Table 6.4 Proportional Distribution (as Percentages) of the Various Ways in which Attitude is Expressed (i.e. Inscribed, Invoked, Evoked, Positive or Negative Orientation) in Each Rating Category**

Rating Category	Inscribed Attitude	Invoked Attitude	Evoked Attitude	Total (%)	Positive orientation	Negative orientation	Total (%)
A1	58.9	10.8	30.3	100	96.2	3.8	100
B1	58.5	11.7	29.8	100	87	13	100
C1	54	14.2	31.8	100	83.3	16.7	100
Y1	58	11.9	30.1	100	81.4	18.6	100

**Table 6.5 Proportional Distribution (as Percentages) of Single- and Multiple-Coded Instantiations of Attitude, and Monoglossic and Heteroglossic Instantiations in the Reports for Each Rating Category**

Rating Category	Single-coded instantiations	multiple- coded (double or triple) instantiations	Total (%)	Monoglossic instantiations	Heteroglossic instantiations	Total (%)
A1	80	20	100	78.5	21.5	100
B1	79	21	100	64.6	35.4	100
C1	75	25	100	66	34	100
Y1	80	20	100	67.3	32.7	100

**Table 6.6 (Table and Sub-table) Proportional Distribution (as Percentages) of Instantiations of Force and Focus in the Reports for Each Rating Category**

Rating Category	FORCE (for more detail see sub-table below)		FOCUS		Total (%)
	Quantification	Intensification	Sharpened	Softened	
A1	50	42.9	6.5	0.6	<b>100</b>
B1	54	36.9	5.1	4	<b>100</b>
C1	60	35.5	2.6	1.9	<b>100</b>
Y1	47.4	46	5	1.6	<b>100</b>

Rating Category	FORCE: Quantification					Sub-total (%)	FORCE: Intensification		Sub-total (%)	Total (%)
	Number	Mass	Presence	Distribution	Proximity		Quality	Process		
A1	15.7	4.3	15.7	12	6.2	<b>53.9</b>	34.3	11.8	<b>46.1</b>	<b>100</b>
B1	22	7.4	13	14.3	2.5	<b>59.2</b>	30	10.8	<b>40.8</b>	<b>100</b>
C1	25.8	11.2	7	11.2	7.3	<b>62.5</b>	30.9	6.6	<b>37.5</b>	<b>100</b>
Y1	21.9	7.2	8.4	7.5	5.8	<b>50.8</b>	41.3	7.9	<b>49.2</b>	<b>100</b>

**Table 6.7 Proportional Distribution (as Percentages) of the Various Ways in which Graduation (Force) can be Expressed: Upscaled or Downscaled, Isolating, Infusing and Figuratively in the Reports for Each Rating Category**

Rating Category	Upscaled	Downscaled	Total (%)	Isolating	Infusing	Figurative	Total (%)
A1	93.5	6.5	<b>100</b>	74.3	23.1	2.6	<b>100</b>
B1	87.7	12.3	<b>100</b>	76.7	21.8	1.5	<b>100</b>
C1	80.7	19.3	<b>100</b>	84.6	14.7	0.7	<b>100</b>
Y1	81.8	18.2	<b>100</b>	75.8	21.9	2.3	<b>100</b>

**Table 6.8 Proportional Distribution (as Percentages) of Contractive and Expansive Heteroglossic Instantiations of Engagement in the Reports for Each Rating Category**

Rating Category	Contraction		Sub-total (%)	Expansion		Sub-total (%)	Total (%)
	Disclaimers	Proclaimers		Entertain	Attribute		
A1	10.7	67.9	<b>78.6</b>	16.9	4.5	<b>21.4</b>	<b>100</b>
B1	12.6	46.9	<b>59.5</b>	35.5	5	<b>40.5</b>	<b>100</b>
C1	12.5	51.2	<b>63.7</b>	32.4	3.9	<b>36.3</b>	<b>100</b>
Y1	18.2	44.9	<b>63.1</b>	34.4	2.5	<b>36.9</b>	<b>100</b>

**Table 6.9 Proportional Distribution (as Percentages) of the Different Types of Contraction: Disclaimers and Proclaimers in the Reports for Each Rating Category**

Rating Category	Disclaimers		Proclaimers				Endorse	Total (%)
	Deny	Counter	Affirm	Concede	Pronounce (objective)	Pronounce (subjective)		
A1	4.3	10	9.2	0	17.9	35.7	22.9	<b>100</b>
B1	9.3	16.7	8.8	2.2	19	31.7	12.3	<b>100</b>
C1	8.5	15	13	3.1	17.4	27	16	<b>100</b>
Y1	10.3	22.3	11.5	3	15.7	24.8	12.4	<b>100</b>

**Table 6.10 Proportional Distribution (as Percentages) of Negative/Deference and Positive/Solidarity Politeness in the Reports for Each Rating Category**

Rating Category	Negative/Deference Politeness	Positive/Solidarity Politeness	Total (%)
A1	66.4	33.6	100
B1	77.2	22.8	100
C1	79.6	20.4	100
Y1	78.4	21.6	100

**Table 6.11 Proportional Distribution of the Various APPRAISAL Instantiations used to Express Positive/Solidarity Politeness**

Positive/Solidarity Politeness				
APPRAISAL Correlates			% Proportions (Total 100%)	
Attitude	Judgement		5.8	
	Appreciation		27.0	
Graduation	Focus	Sharpened	1.4	
		Softened	0	
	Force	Quantification	1.4	
		Intensification	5.0	
Engagement	Expansion	Entertainment	2.5	
		Acknowledge	3.6	
		Distance	1.4	
	Contraction	Disclaimers	Deny	0
			Counter	3.3
		Proclaimers	Concur (Affirm/Concede)	28.8
			Pronounce (obj)	7.5
			Pronounce (subj)	6.5
			Endorse	5.8

**Table 6.12 Proportional Distribution of the Various APPRAISAL Instantiations used to Express Negative/Deference Politeness**

Negative/Deference Politeness				
APPRAISAL Correlates			% Proportions (Total 100%)	
Attitude	Judgement		2.0	
	Appreciation		7.4	
Graduation	Focus	Sharpened	0.6	
		Softened	1.8	
	Force	Quantification	2.0	
		Intensification	5.7	
Engagement	Expansion	Entertainment	33.0	
		Acknowledge	1.0	
		Distance	0.5	
	Contraction	Disclaimers	Deny	3.2
			Counter	5.8
		Proclaimers	Concur (Affirm/Concede)	2.4
			Pronounce (obj)	8.0
			Pronounce (subj)	21.1
			Endorse	5.5

**Appendix 2 Tables 6.13 – 6.17. Summary of the APPRAISAL Analysis: Comparison of the Prevalence and Role of all APPRAISAL Categories and Politeness in the Reports for the A1, B1, C1 and Y1 Rated Researchers**

**Table 6.13 General Features of the Reports for the A1, B1, C1 and Y1 Rated Researchers**

	<b>Reports for the A1 Researchers</b>	<b>Reports for the B1 Researchers</b>	<b>Reports for the C1 Researchers</b>	<b>Reports for the Y1 Researchers</b>
<b>NRF Criteria for Researchers Rated in each of the Categories</b>	A researcher in this group is recognised by all reviewers as a leading scholar in his/her field internationally for the high quality and wide impact (i.e. beyond a narrow field of specialisation) of his/her recent research outputs.	All reviewers concur that the applicant enjoys considerable international recognition for the high quality and impact of his/her recent research outputs, with some of them indicating that he/she is a leading international scholar in the field.	While all reviewers concur that the applicant is an established researcher (as described), some of them indicate that he/she already enjoys considerable international recognition for his/her high quality recent research outputs.	A researcher in this group is recognised by all reviewers as having the potential (demonstrated by research products) to establish him/herself as a researcher with some of them indicating that he/she has the potential to become a future leader in his/her field. (Applicants on the borderline between P and Y should be rated at this level.)
<b>GENERAL</b>				
<b>Number of Reports per Suite (on Average)</b> (see Table 6.1)	7 reports per applicant.	7.3 reports per applicant.	6.3 reports per applicant.	6.6 reports per applicant.
<b>Average Length of Reports</b> (see Table 6.2)	700 words.	542 words.	704 words.	602 words.
<b>Proportion Constituted by the Opening Paragraphs of the Reports (as a Percentage)</b> (see Table 6.2)	20%	13%	16%	12%
<b>NRF Gradings Assigned to the Reports</b> (c.f. Appendix 4, see also Table 3.1)	All reports except 2 are graded as 'excellent' ('1').	12 reports are graded as 'excellent' ('1'), 2 as 'excellent/satisfactory' ('1/2') and 8 as 'satisfactory' ('2').	5 reports are graded as 'excellent', 6 as 'excellent/satisfactory' and 7 as 'satisfactory'.	5 reports are graded as 'excellent', 3 as 'excellent/satisfactory' and 12 as 'satisfactory'.
<b>Features of the Opening Paragraph</b>	<ul style="list-style-type: none"> <li>▪ The opening paragraphs are on average longer and constitute a greater proportion of the reports compared to the other rating</li> </ul>	<ul style="list-style-type: none"> <li>▪ Because the reports themselves are, on average so much shorter than those for the other categories, the opening paragraphs of the B1</li> </ul>	<ul style="list-style-type: none"> <li>▪ The opening paragraph is longer than that for the B1 or Y1 researchers, but shorter than that for the A1 researchers.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The opening paragraph constitutes the smallest proportion of the reports for the Y1 researchers than those for the other rating</li> </ul>

	<p>categories.</p> <ul style="list-style-type: none"> <li>▪ Included are assessments of the applicant’s work and personal qualities: evaluations not elicited in this section.</li> <li>▪ There are mostly positive self-evaluations (Capacity, Reaction and Valuation) by the reviewers. Nearly all the reviewers are very familiar with the applicant and his/her work and have cited it. If they haven’t cited it, it is only because they work in a slightly different field.</li> <li>▪ Reviewers make an effort to claim acquaintance with the applicant and to show that they are well-placed to provide a review. Some indicate that they see it as a ‘privilege’ to act as reviewers.</li> <li>▪ There is a great deal of upscaled Force: (Quantification) to emphasise the length of the applicants career (Distribution: time), the wide impact of his/her work (Distribution: space), his/her eminence (presence), the amount of work produced (number/mass).</li> </ul>	<p>reports are the shortest of all the rating categories.</p> <ul style="list-style-type: none"> <li>▪ There are fewer assessments of the applicant and his/her work in this section, compared to the A1 reports. Most evaluations concern how well the reviewer knows the applicant and in what capacity.</li> <li>▪ The reviewers do not make as much of an effort to claim acquaintance with the B1 applicant as they do with the A1 applicant. There is also less upscaled Force, and some downscaling.</li> <li>▪ There is a predominance of positive self-evaluations: most reviewers are acquainted with the applicant (although fewer than in the A1 reports).</li> <li>▪ However, not all the reviewers have cited the applicant’s work or are closely acquainted with him/her: there are rather more negative self-evaluations than in the A1 reports.</li> <li>▪ It appears more difficult to find suitable reviewers for a B1 applicant (see point above). This may be because the B1 applicant is less well known and prominent in the field.</li> </ul>	<ul style="list-style-type: none"> <li>▪ There are some additional evaluations of the applicant and his/her work not elicited in this section, but fewer than in the A1 reports.</li> <li>▪ There are mostly positive self-evaluations showing that the applicant is generally well known, but clearly not as well known as the A1 and B1 researchers.</li> <li>▪ More reviewers are not very well acquainted with the C1 applicant or have cited his/her work, compared to the A1 and B1 applicants. This is seen in less upscaled and more downscaled Force.</li> <li>▪ Reviewers make less of an effort to claim acquaintance with the applicant than they do for the A1 researchers (i.e. they do not make a special effort to read more of the applicant’s work for the purpose of writing the report).</li> </ul>	<p>categories: they Y1 applicant being at the early stages of his/her career is less well known by the reviewers.</p> <ul style="list-style-type: none"> <li>▪ The Y1 reports have the fewest number of reports graded as ‘excellent’. This indicates that it is more difficult finding the most suitable reviewers for researchers not yet fully established.</li> <li>▪ There are more negative self-evaluations (showing less acquaintance with the applicant and his/her work) than there are for the other rating categories. There is also more downscaled and less upscaled Force.</li> <li>▪ There are almost no additional evaluations of the applicant and his/her work in the opening section (such as is found in the A1 reports).</li> </ul>
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<p><b>Other Characteristics</b></p>	<ul style="list-style-type: none"> <li>▪ A1 reviewers appear to be more familiar with the rating system than the reviewers for the other categories. Some have written reports for the applicant before (previous review periods). The A1 reviewers also appear to have more of an awareness of the high stakes involved, and the rewards accompanying an NRF rating.</li> </ul>			<ul style="list-style-type: none"> <li>▪ The reviewers are not all 'true' peers of the applicant: some are more senior researchers such as former supervisors, external examiners etc. This is unsurprising, considering that a younger, less experienced researcher is unlikely to have networks as extensive as the A1, B1 and C1 researchers.</li> </ul>
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**Table 6.14 Attitude in the Reports for the A1, B1, C1 and Y1 Rated Researchers**

	<b>Reports for the A1 Researchers</b>	<b>Reports for the B1 Researchers</b>	<b>Reports for the C1 Researchers</b>	<b>Reports for the Y1 Researchers</b>
<b>ATTITUDE</b>				
<b>Average Number of Instantiations per Report</b> (see Table 6.1)	55 instantiations of Attitude per report.	50 instantiations of Attitude per report.	57 instantiations of Attitude per report.	52 instantiations of Attitude per report.
<b>Role of Affect</b>	Negligible.			
<b>Role of Judgement: Social Esteem</b> (see Table 6.3)	<ul style="list-style-type: none"> <li>▪ <b>Normality:</b> This is the most infrequent type of Social Esteem. However, when it is used, it emphasises the status of the applicant as a ‘figurehead’ in the field i.e. exceptional and set well above his/her peers.</li> <li>▪ <b>Capacity:</b> There is more Capacity in the A1 reports than any of the other reports. It is used to evaluate the natural abilities of the applicant i.e. his/her skill, talent and competence. Capacity is also used by the reviewers, to evaluate themselves as well-positioned (or otherwise) to provide assessment reports.</li> <li>▪ <b>Tenacity:</b> There is slightly less Tenacity in the A1 reports than there are in any of the other reports, due to there being slightly more emphasis on Capacity. Tenacity is used to evaluate the applicant as: productive, reliable, resolved, someone who is a leader, takes initiative and drive, and pursues his/her researcher with determination and</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Normality:</b> Like the A1 reports, Normality occurs infrequently. When used, it is usually to evaluate the applicant’s work (rather than the applicant) as innovative. There is slightly less Normality in the B1 reports than there are in the A1, C1 and Y1 reports, possibly as a result of the reports being shorter and less varied overall.</li> <li>▪ <b>Capacity:</b> Capacity is used nearly as frequently as in the A1 reports showing that there is more emphasis on the natural talents and skills of the researchers in these top two categories. It is also used in self-assessments concerning the suitability of the reviewer.</li> <li>▪ <b>Tenacity:</b> The highest proportion of Tenacity can be found in the B1 reports. Whereas the reliability and leadership of the A1 applicant can be taken for granted, and is not as great for the C1 and Y1 researchers (and are thus emphasised less).</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Normality:</b> Normality is used in the C1 reports in the same way as it is in the A1 and B1 reports: mainly to assess the novelty or the work. In the C1 reports, however, one finds more negative Normality, where the innovation of the applicant’s work is sometimes called into question.</li> <li>▪ <b>Capacity:</b> Capacity is used in the C1 reports to assess the applicant’s competence and skills, and the suitability of the reviewers. One finds more negative Capacity in the C1 and Y1 reports than the A1 and B1 reports.</li> <li>▪ <b>Tenacity:</b> Like the A1, B1 and Y1 reports, Tenacity is used to assess the productivity, leadership abilities and initiative of the applicant.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Normality:</b> Normality has about the same prevalence as it does in the A1 and C1 reports. However, it is used differently in the Y1 reports to how it is used in the reports for main rating categories. In the Y1 reports, the applicant is evaluated as ‘exceptional’ despite lacking in the experience of the more established researchers. The Y1 researcher is ‘special’ as a result of potential demonstrated more than accomplished works.</li> <li>▪ <b>Capacity:</b> There is slightly less Capacity in the Y1 reports than there is in the A1, B1 and C1 reports. When used it is to evaluate the skills, talents and potential of the applicant. <u>Potential</u> is far more pertinent in the Y1 reports than the reports for the main rating categories.</li> <li>▪ <b>Tenacity:</b> There is slightly less Tenacity in the Y1 reports than there is in the B1 and C1 reports. It is</li> </ul>

	persistence.			used to assess the productivity, initiative and independence of the applicant. How far the applicant is working independently of his/her supervisors and mentors is a more pertinent feature of the Y1 reports than the others.
<b>Role of Judgement: Social Sanction</b> (see Table 6.3)	<ul style="list-style-type: none"> <li>▪ <b>Veracity:</b> Veracity is occasionally used to verify the truth of certain statements made by the applicant in his/her application, but plays a negligible role overall.</li> <li>▪ <b>Propriety:</b> occurs infrequently in the report, but when used, shows that they applicant's research is of benefit to society and is ethical.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Veracity:</b> Like the A1 reports, Veracity plays a negligible role overall.</li> <li>▪ <b>Propriety:</b> There is less Propriety in the B1 reports than any of the others. It occurs only in a few instances to draw attention to the benefit of the applicant's work to society.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Veracity:</b> Like the A1 and B1 reports, Veracity plays a negligible role overall.</li> <li>▪ <b>Propriety:</b> Like the A1 and B1 reports, Propriety is used to assess the ethical considerations of the applicant's work, and its benefit to society.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Veracity:</b> Like the A1, B1 and C1 reports, Veracity plays a negligible role overall.</li> <li>▪ <b>Propriety:</b> Like the A1, B1 and C1 reports, Propriety is used to assess the ethical considerations of the applicant's work, and its benefit to society.</li> </ul>
<b>Role of Appreciation</b> (see Table 6.3)	<ul style="list-style-type: none"> <li>▪ <b>Reaction:</b> Reaction is used by the reviewers to convey excitement, admiration and respect for the applicant. It is also used in multiple-coded evaluations to show that the work is of interest, locally and internationally and generates a great deal of discussion and attention. It is also used as a solidarity politeness strategy to construe a subjective Reaction as a property of the Appraised.</li> <li>▪ <b>Composition:</b> Composition is the least frequent type of Appreciation. When used, it highlights the lucidity,</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Reaction:</b> The B1 reports, like the C1 reports, contain slightly less Reaction than the A1 and Y1 reports. This is because being neither the top rating category, nor a separate category for up-and-coming researchers, there is less additional incentive for evaluations of Reaction. Like the A1 reports, however, Reaction can be used as a solidarity politeness strategy, as well as to express interest in the applicant's work.</li> <li>▪ <b>Composition:</b> Composition</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Reaction:</b> The C1 reports, like the B1 reports, contain slightly less Reaction than the A1 and Y1 reports. It is used to indicate interest in and reception of the applicant's work by the community, but there is some negative Reaction, which is found less frequently in the A1 and B1 reports.</li> <li>▪ <b>Composition:</b> Composition in the B1 and C1 reports occurs less frequently than in the A1 and C1 reports (see reasons mentioned under B1 reports).</li> <li>▪ <b>Valuation:</b> Valuation comprises almost half of all instantiations of Attitude, (as</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Reaction:</b> Reaction occurs about as frequently in the Y1 reports as it does in the A1 reports, but for rather different reasons. It is used to express the reviewers' general impressions of the applicant and his/her work in terms of their initial impact and future possibilities. There is some negative Reaction, which is not found in the A1 reports.</li> <li>▪ <b>Composition:</b> One finds in the Y1 reports that Composition is used more frequently to assess aspects of the applicant's application (i.e. self-assessment and</li> </ul>

	<p>coherence and elegance of the applicant's work.</p> <ul style="list-style-type: none"> <li>▪ <b>Valuation:</b> Valuation comprises nearly half of all instantiations of Attitude, Judgement and Appreciation combined. It is used to assess the value of the applicant's work: the quality, the usefulness, the applicability for science and its benefit to society, industry, government. Valuation is also used to assess the applicant as a quality researcher who is an asset to the community and field of research. There is slightly less Valuation for the A1 applicant than there is for the other reviewers. This is because of the very positive nature of the reports: the reviewers use a wider variety of means for praising the applicant and his/her work.</li> </ul>	<p>in the B1 and C1 reports is less prevalent than in the A1 and B1 reports. This is because there is less emphasis on the sophisticated style of the research than there is in the A1 reports and less emphasis on the nature of the application submitted than there is in the Y1 reports.</p> <ul style="list-style-type: none"> <li>▪ <b>Valuation:</b> Valuation comprises almost half of all instantiations of Attitude, rather more than in the A1 reports. It is used to assess the quality, usefulness and applicability of the applicant's work.</li> </ul>	<p>with the B1 and Y1 reports). It is used to assess the quality, usefulness and applicability of the applicant's work, and the worth of the applicant as a member of the scientific community.</p>	<p>details of research/career). It is also sometimes used in assessments of the coherence of the research.</p> <ul style="list-style-type: none"> <li>▪ <b>Valuation:</b> Valuation comprises almost half of all instantiations of Attitude, (as with the B1 and C1 reports). It is used to assess the quality, usefulness and applicability of the applicant's work, and the worth of the applicant as an independent researcher making a contribution to the field. There is more negative Valuation in the Y1 reports than there is in the B1 and C1 reports.</li> </ul>
<p><b>Role of Positive/Negative Orientation of Evaluations</b> (see Table 6.4)</p>	<p>Unlike the reports for the B1, C1 and Y1 categories, there are no criticisms or negative evaluations of the A1 applicant whatsoever. Negative evaluations are only of other researcher or the reviewers themselves, in comparisons to the applicant. This is the most prominent feature of the A1 reports that sets them apart from the reports in the other rating categories.</p>	<p>There are some negative evaluations (criticisms) of the B1 applicant, although far fewer than are found in the C1 reports. Criticisms generally concern: the journals in which the applicant publishes and the role of the applicant in disseminating his/her research, the overall impact of the work, and its significance for society/industry. There are also more negative self-evaluations in the B1 reports than there are in the A1 reports, reflecting the fact that there are fewer 'ideal' reviewers for</p>	<p>There are noticeably more criticisms of the C1 applicant and his/her work than there are for the B1 applicant (although fewer than there are for the Y1 applicants). Criticisms are therefore more varied than they are for the B1 applicant. In addition to the criticisms made of the B1 researcher, a C1 researcher may also be criticised with regards to: the quality, style and novelty of the applicant's work and the applicant's international standing.</p>	<p>Reviewers tend to be rather more generous with their praise of Y1 applicants than they are with the A1, B1 and C1 researchers, and they take into account the limitations under which less experienced researchers operate. However, there are more negative evaluations of the Y1 researcher than there are of the others, and they are mostly criticisms of the applicant and his/her work. They include: the applicant's independence and initiative as a researcher, his/her research networks, collaborative</p>

		researchers rated in the lower categories.		partnerships, conferences attended, journals in which published and students supervised. There are also more criticisms of the documentation (self-evaluation) submitted to the NRF and also received by the reviewers.
<b>Role of the Type of Attitude: Inscribed, Invoked and Evoked</b> (see Table 6.4)	Like the B1, C1 and Y1 reports, the majority of instantiations are <b>inscribed</b> , followed by evoked and then invoked instantiations. In the A1 reports, <b>evoked</b> instantiations are mostly used in self-evaluations (where the reviewers, by acclaiming acquaintance with the applicant are evaluating themselves positively) and evaluations which rely on the readers' understanding of what is valued in the community (e.g. saying that an applicant having a high number of PhD students corresponds to a positive evaluation because student supervision is considered of value). <b>Invoked</b> instantiations occur in multiple-coding and in the A1 reports, serve to augment and vary the positive assessments of the applicant.	Like the A1, C1 and Y1 reports, the majority of instantiations are <b>inscribed</b> , followed by evoked and then invoked instantiations. <b>Invoked</b> instantiations occur in a variety of multiple-coded evaluations, mostly to simultaneously praise aspects of the applicant's career, but sometimes in simultaneously positive and negative evaluations (e.g. when offering advice, making criticisms more 'polite' etc). <b>Evoked</b> instantiations are used in self-evaluations (like in the A1 reports) and evaluations dependent on in-group community values.	Like the A1, B1 and Y1 reports, the majority of instantiations are <b>inscribed</b> , followed by evoked and then invoked instantiations. <b>Invoked</b> evaluations occur in similar situations to the B1 reports, except that there are rather more criticisms, suggestions and recommendations, expressed through multiple-coding. Like the A1 and B1 reports, <b>evoked</b> evaluations are used in self-evaluations and evaluations dependent on in-group community values.	Like the A1, B1 and C1 reports, the majority of instantiations are <b>inscribed</b> , followed by evoked and then invoked instantiations. <b>Invoked</b> evaluations occur in similar situations to the B1 and C1 reports, except that there are significantly more criticisms, suggestions, recommendations, and advice expressed through multiple-coding. Like the A1, B1 and C1 reports, <b>evoked</b> evaluations are used in self-evaluations and evaluations dependent on in-group community values.
<b>Role of Multiple-Coding</b> (see Table 6.5)	Because the A1 reports are wholly positive, multiple codings are used to: <ul style="list-style-type: none"> <li>Simultaneously evaluate the applicant and his/her work, or multiple aspects of the applicant or his/her work positively;</li> <li>Simultaneously evaluate the</li> </ul>	In the B1 reports, multiple-codings are used to: <ul style="list-style-type: none"> <li>Simultaneously praise one aspect of the applicant's work/career, while criticising others (this can function as a way of downplaying a negative evaluation, and is also used when making</li> </ul>	In the C1 reports, multiple-codings are used to: <ul style="list-style-type: none"> <li>Simultaneously praise one aspect of the applicant's work/career, while criticising others (this is rather more common in the C1 reports);</li> <li>Praise or criticise various aspects of the applicant's</li> </ul>	In the Y1 reports, multiple codings are used in the same way as they are for the A1, B1 and C1 reports, except that there are more criticisms and negative evaluations involved, and it is more common for reviewers to provide advice and suggestions, which involves multiple-coding.

	<p>reviewer and the applicant (often to set the applicant above the reviewer);</p> <ul style="list-style-type: none"> <li>▪ Simultaneously evaluate the applicant and other researchers (again, to set the applicant above others in the field).</li> </ul>	<p>suggestions or recommendations for future courses of action);</p> <ul style="list-style-type: none"> <li>▪ Simultaneously evaluate the applicant and his/her work, or multiple aspects of the applicant or his/her work positively;</li> <li>▪ Simultaneously evaluate the applicant and the reviewer.</li> </ul>	<p>work/career etc simultaneously;</p> <ul style="list-style-type: none"> <li>▪ Simultaneously evaluate the applicant and the reviewer, or the applicant and other scientists working in the field.</li> </ul>	
<p><b>Monoglossic and Heteroglossic Instantiations</b> (see Table 6.5)</p>	<p>The majority of instantiations are monoglossic rather than heteroglossic. There is also far more monoglossia in the A1 reports than there is in the reports for the other rating categories. The effect is that there is less prominence of the authorial voice and the A1 reports appear more ‘factual’ (and less about ‘opinions’) than the B1, C1 and Y1 reports.</p>	<p>In the B1, C1 and Y1 reports, there is more monoglossia than heteroglossia. However, there is more heteroglossia that there is in the A1 reports. The effect is that in the B1, C1 and Y1 reports, there is more presence of the reviewers’ subjective voices, and the reports appear slightly less ‘factual’ than the A1 reports.</p>		

**Table 6.15 Graduation in the Reports for the A1, B1, C1 and Y1 Rated Researchers**

	<b>Reports for the A1 Researchers</b>	<b>Reports for the B1 Researchers</b>	<b>Reports for the C1 Researchers</b>	<b>Reports for the Y1 Researchers</b>
<b>GRADUATION</b>				
<b>Average Number of Instantiations per Report</b> (see Table 6.1)	38 instantiations per report.	28 instantiations per report.	24 instantiations per report.	22 instantiations per report.
<b>Role of Force and Focus</b> (see Table 6.6)	Nearly all instantiations of Graduation are Force rather than Focus. This is to be expected considering that only ‘good scientists’ (a matter of Focus i.e. conformance to a prototype) are rated, and the different ratings concern degrees of eminence and extent of influence which is a matter of Force.	Nearly all instantiations of Graduation are Force rather than Focus. However, there is slightly less Force and more Focus in the B1 reports than in the other reports.	Nearly all instantiations of Graduation are Force rather than Focus. However, there is slightly more Force and less Focus in the C1 reports than in the other reports.	Nearly all instantiations of Graduation are Force rather than Focus.
<b>Role of Force: Quantification</b> (see Table 6.6)	<ul style="list-style-type: none"> <li>▪ <b>Number:</b> Upscaled Number occurs frequently and generally emphasises the scale of the applicant’s research outputs, collaborative relationships, research networks and students supervised (where quantified in terms of amount). Downscaled Number is sometimes used to assess other researchers/ the reviewers who have not had such an impact in this respect.</li> <li>▪ <b>Mass:</b> Upscaled mass is, like number, used to emphasise the volume of work the applicant has accomplished and projects he/she has undertaken (except in terms of size rather than amount). It occurs less frequently than</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Number:</b> Number is used more in the B1 (also the C1 and Y1) reports than it is in the A1 reports. This is because in these lower rating categories there is less emphasis on Mass (volume of output) and Presence (eminence and status). Number is used for the same kinds of evaluations and concerns, but it is sometimes downscaled rather than upscaled.</li> <li>▪ <b>Mass:</b> There is more Mass in the B1, C1 and Y1 reports than there is in the A1 reports (as a result of there being less emphasis on Presence in the lower rating categories).</li> <li>▪ <b>Presence:</b> in the B1, C1 and Y1 reports, there is far less</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Number:</b> Number is used more in the C1 reports than it is in the A1 and B1 reports, for the same kinds of evaluations, and is more frequently downscaled.</li> <li>▪ <b>Mass:</b> There is more Mass in the B1, C1 and Y1 reports than there is in the A1 reports (as a result of there being less emphasis on Presence in the lower rating categories).</li> <li>▪ <b>Presence:</b> In the B1, C1 and Y1 reports, there is far less emphasis on presence (and rather more on Number and Mass), emphasising the less eminent status of those researchers not ranked in the top rating category.</li> <li>▪ <b>Extent: Proximity (time/space):</b> Proximity is</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Number:</b> Number is used more in the Y1 reports than it is in the A1 reports for the same kinds of evaluations, and is more frequently downscaled.</li> <li>▪ <b>Mass:</b> There is more Mass in the B1, C1 and Y1 reports than there is in the A1 reports (as a result of there being less emphasis on Presence in the lower rating categories).</li> <li>▪ <b>Presence:</b> In the B1, C1 and Y1 reports, there is far less emphasis on presence (and rather more on Number and Mass), emphasising the less eminent status of those researchers not ranked in the top rating category.</li> <li>▪ <b>Extent: Proximity (time/space):</b> Proximity</li> </ul>

	<p>Number, and constitutes a lesser proportion of Quantification, compared to the reports for the other rating categories, due to there being more emphasis on Presence on the A1 reports.</p> <ul style="list-style-type: none"> <li>▪ <b>Presence:</b> Presence, like Number is highly prevalent in the A1 reports, and there is more Presence in the A1 reports than in any of the others. It is used to upscale evaluations concerning the eminence and stature of the applicant, and the significance of his/her work.</li> <li>▪ <b>Extent: Proximity (time/space):</b> Proximity (time) is occasionally used by reviewers in self-evaluations when clarifying when they have had contact with the applicant. Upscaled Proximity (space) is very rare and plays a negligible role in the A1 reports.</li> <li>▪ <b>Extent: Distribution (time/space):</b> Distribution (time) is occasionally used in self-evaluations by reviewers to indicate the relative regularity of their contact with the applicant. Upscaled Distribution (space) is generally used to indicate the far-reaching, international extent of the applicant's influence.</li> </ul>	<p>emphasis on presence (and rather more on Number and Mass), emphasising the less eminent status of those researchers not ranked in the top rating category.</p> <ul style="list-style-type: none"> <li>▪ <b>Extent: Proximity (time/space):</b> Proximity plays a small and fairly insignificant role in the B1 reports (which are the shortest and least varied of all the reports).</li> <li>▪ <b>Extent: Distribution (time/space):</b> Distribution (space) is more common than Distribution (time) and functions in the same way as in the A1 reports, but is infrequent.</li> </ul>	<p>used occasionally, in the same way as it is used in the A1 reports.</p> <ul style="list-style-type: none"> <li>▪ <b>Extent: Distribution (time/space):</b> Distribution (space) is more common than Distribution (time) and functions in the same way as in the A1 reports, but is infrequent.</li> </ul>	<p>plays a small and fairly insignificant role in the Y1 reports.</p> <ul style="list-style-type: none"> <li>▪ <b>Extent: Distribution (time/space):</b> Distribution (space) is more common than Distribution (time) and functions in the same way as in the A1 reports, but is infrequent. There is less Distribution overall in the Y1 reports, perhaps reflecting the more restricted impact and influence of the applicant and his/her work.</li> </ul>
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<b>Role of Force: Intensification</b> (see Table 6.6)	<b>Quality (degree)</b>	Most Intensification is in terms of Quality rather than Process, and upscales positive evaluations of the applicant, his/her work and various aspects of his/her career (mostly Appreciation).	The distribution and functioning of Quality and Process is very similar to the A1 reports, except that there is some downscaled instantiations together with the upscaled instantiations.	In the C1 and Y1 reports, there is slightly less emphasis on Processes and more on Quality. This may be that because the applicant has not been active in the field for as long as the more established researchers, it is mostly the accomplished works that form the basis of the assessments.	
	<b>Process (vigour)</b>	Upscaled Process is used mainly to graduate evaluations of the applicant's personal qualities (mostly Judgement) and conduct.			
<b>Role of Focus</b> (see Table 6.6)	<b>Sharpened</b>	Focus is used less than Force, but when used, nearly always functions to sharpen evaluations of the applicant and his/her work, in order to construe it as 'model'.	Sharpened Focus is used in about the same distribution and for the same functions as it is in the A1 reports.	Sharpened Focus does not play much of a role in the C1 reports, where there is slightly more emphasis on Force than there is in the reports for the other rating categories.	Sharpened Focus is used in about the same distribution and for the same functions as it is in the A1 and B1 reports.
	<b>Softened</b>	Softening is very rare and is never used for evaluations of the applicant and his/her work, but instead in self-evaluations by the reviewers.	There is more softened Focus in the B reports than there is in the A1, C1 and Y1 reports. When used, it is often together with deference politeness strategies or negative evaluations. This shows that criticisms are made more tentatively in the B1 reports than in the C1 and Y1 reports.	Softened Focus is rare. It is generally used in criticisms as part of a deference politeness strategy.	Softened Focus is rare. When used it is as part of a criticism or politeness strategy, or to assess the extent to which the applicant conforms to the 'ideal established researcher'.
<b>Role of Upscaling and Downscaling of Force</b> (see Table 6.7)		Almost all instantiations of Force are <b>upscaled</b> . Upscaling is far more prevalent in the A1 reports than it is in the reports for the other rating categories. <b>Downscaling</b> is only used for evaluations of the reviewers (self-evaluations) and speculations, but not the applicant or aspects of his/her work.	The vast majority of all instantiations are upscaled, but there is more downscaling in the B1 reports than there is in the A1 reports. This is generally a consequence of there being some negative evaluations of the applicant, not found in the A1 reports, and more moderation in the construal of positive evaluations.	The C1 and Y1 reports have a similar distribution of upscaled instantiations of Force and downscaled instantiations. The majority of instantiations are upscaled, but there is more downscaling than there is in the A1 and B1 reports. This is to be expected considering that there are more negative evaluations in these two rating categories, and	The C1 and Y1 reports have a similar distribution of upscaled instantiations of Force and downscaled instantiations. The majority of instantiations are upscaled, but there is more downscaling than there is in the A1 and B1 reports. This is to be expected considering that there are more negative evaluations in these two rating categories, and

			reviewers are more reserved in the positive evaluations they make.	reviewers are more reserved in the positive evaluations they make.
<b>Role of the Type of Force: Isolating, Infusing and Figurative</b> (see Table 6.7)	In all the reports (A1, B1, C1 and Y1), the majority of instantiations are <b>isolating</b> , followed by <b>infused</b> and then <b>figurative</b> instantiations. However, there is slightly more infused and figurative Graduation in the A1 reports (compared to the others), highlighting that they contain richer and more varied ways in which reviewers evaluate (and praise) the applicant.	In all the reports (A1, B1, C1 and Y1), the majority of instantiations are <b>isolating</b> , followed by <b>infused</b> and then <b>figurative</b> instantiations. In the B1 and C1 categories, however, being neither the top category nor the lowest, have slightly less figurative and infusing Graduation.		In all the reports (A1, B1, C1 and Y1), the majority of instantiations are <b>isolating</b> , followed by <b>infused</b> and then <b>figurative</b> instantiations. However, in the Y1 reports, like the A1 reports there is slightly more figurative Graduation. Figurative language is not generally characteristic of scientific discourse, but reviewers deviate from these conventions for the very top category (A1) and for younger researchers starting out in the community (Y1).
<b>Types of Attitude Graduated</b>	Graduation is used in the A1 reports mainly to upscale positive evaluations of the applicant. Overall there is far more Graduation in the A1 reports than there is in any of the others. This makes the positive tone much stronger and more noticeable in the A1 reports.	In the A1 reports, Graduation is used mainly to upscale positive evaluations of the applicant, but together with the introduction of some negative evaluations is some downscaling. Because there is much less Graduation in the B1 reports, compared to the A1 reports, the positive assessments of the applicant are more moderate.	Like the B1 reports, there is some upscaling of positive evaluations of the applicant and his/her work, but there is downscaling too, sometimes paired with criticisms or as part of a deference politeness strategy. The result is that the positive evaluations are a little more moderate and reserved than those in the B1 reports.	In the Y1 reports, there is some upscaling of positive evaluations of the applicant. There is also slightly more upscaling of negative evaluations (i.e. making negative evaluations stronger and less tentative). Downscaling is used generally as part of a deference politeness strategy concerning positive evaluations made, but also sometimes when making criticisms.

**Table 6.16 Engagement in the Reports for the A1, B1, C1 and Y1 Rated Researchers**

		<b>Reports for the A1 Researchers</b>	<b>Reports for the B1 Researchers</b>	<b>Reports for the C1 Researchers</b>	<b>Reports for the Y1 Researchers</b>
<b>ENGAGEMENT</b>					
<b>Average Number of Heteroglossic Instantiations per Report</b> (see Table 6.1)		11 instantiations per report.	15 instantiations per report.	17 instantiations per report.	17 instantiations per report.
<b>Role of Expansion and Contraction</b> (see Table 6.8)		Like the B1, C1 and Y1 reports, there is more Contraction than Expansion. In the A1 reports however, there is far more Contraction and less Expansion than is found in the reports for the other rating categories.	There is more Contraction than Expansion in the B1 reports. Interestingly, there is slightly more Expansion in the B1 reports than any of the others. However, because this is a result of there being slightly more Attribution (rather than Expansion), it cannot be seen as making the reports less 'objective' or 'factual', but instead including more additional 'voices' in the text.	There is a very similar distribution of Contraction and Expansion in the C1 and Y1 reports. Overall there is more Contraction than Expansion, but there is far more Expansion than is found in the A1 reports. The effect is generally to emphasise the role of subjective opinion and the individual voices of the reviewers. This makes the overall evaluation of the applicant rather less 'definite' and 'factual'.	
<b>Role of Expansion</b> (see Table 6.9)	<b>Entertainment</b>	There is far less Entertainment in the A1 reports than in the B1, C1 and Y1 reports.	One finds a similar proportion of Entertainment in the B1, C1 and Y1 rating categories. In these three categories, Entertainment is far more prevalent than Attribution, and constitutes about a third of all the Engagement strategies. Entertainment is sometimes used to indicate (genuine) uncertainty on the part of the reviewer, but more frequently as part of a deference politeness strategy (where a potentially face-threatening evaluation is hedged or made to sound more 'tentative').		
	<b>Attribution: Acknowledge</b>	Acknowledgements are rare but are used mainly to refer to views held by other scientists, and sometimes as a solidarity politeness strategy.			
	<b>Attribution: Distance</b>	Distancing is even rarer than Acknowledgement but is also used to refer to (and dispute/disprove) views held by other scientists.	Overall, Distancing plays an insignificant role in the reports for all four rating categories. In the B1, C1 and Y1 reports, it is occasionally used to indicate that the reviewer is withdrawing any explicit indication of his/her stance. Generally however, the effect of this is a negative one, with the Distancing is functioning as a deference politeness strategy.		

<b>Role of Contraction</b> (see Table 6.9)	<b>Disclaim: Deny</b>	Disclaimers do not play an especially prominent role in the A1 reports. When they do occur, however, it is often to show how the work of the applicant has resulted in changes in the field and the thinking of those working in it i.e. where the work of the applicant has ‘disclaimed’ and replaced previous theories. Countering is also used by some reviewers when attempting to justify their suitability to act as reviewers: where a negative self-evaluation is countered by a more positive one that follows.	The B1 and C1 reports have a fairly similar proportion of Disclaimers, with similar functions. These functions tend to be a combination of those most prevalent in the A1 reports, and those for the Y1 reports.		There are far more disclaimers in the Y1 reports than there are in any of the others. Where a Y1 applicant is at a stage in his/her career where the aim to be moulded into an established scientific researcher, one would expect more disclaimers. They are used in discussions concerning the expectations various parties (e.g. the reviewers, NRF Assessment Panel etc) may or may not have of the applicant, and the extent to which the applicant is fulfilling these expectations (or otherwise).
	<b>Disclaim: Counter</b>				
	<b>Proclaim: Concur: Affirm</b>	In the reports for all four rating categories, Affirmation constitutes a fairly small proportion of Engagement overall. It is used with significant effect however: generally as a positive politeness strategy to indicate perceived shared knowledge and attitudes. In this way it is also a clear indication of the reviewer’s stance, and the stance of the naturalised readers.			
	<b>Proclaim: Concur: Concede</b>	There are no instances of Concede in the A1 reports.	Concessions are far less frequent than Affirmation. When used in the B1, C1 and Y1 reports, it is often as part of a deference politeness strategy, where a negative evaluation is made with consideration to a more positive one (or vice versa).		
	<b>Pronounce (objective)</b>	In the reports for <b>all</b> the rating categories, objective Pronouncement is used to construe evaluations as a matter of logical deduction deriving from facts. Although not as ‘factual’ as monoglossic evaluations, objective Pronouncement is strongly contractive and does not entail the explicit inclusion of the authorial voice. Objective Pronouncement occurs in the A1 reports in a similar proportion to the C1 reports (but there is not a great deal of variation among the categories).	Objective Pronouncement is slightly more prominent in the B1 reports which are, overall, more moderate and less varied in the range of Engagement strategies used (i.e. this prominence appears to be due to a lack of emphasis on other strategies on which the other rating categories place more emphasis e.g. Disclaimers, Endorsement).	The proportional distribution of objective Pronouncement in the C1 reports is very similar to that of the A1 reports.	The proportion of objective Pronouncement is rather smaller in the Y1 reports than it is in the A1, B1 and C1 reports. This appears to be due to there being more emphasis on Disclaimers, and also Expansive heteroglossia.

<b>Role of Contraction (continued)</b> (see Table 6.9)	<b>Pronounce (subjective)</b>	Subjective Pronouncement and Endorsement are the most common contractive strategies in the reports for <b>all</b> four rating categories. Subjective Pronouncement is often used as a deference politeness strategy, where reviewers indicate that an evaluation is a personal belief rather than a proven fact. It is also used in cases of uncertainty on the part of the reviewer about certain aspects of the applicant's work they are not entirely familiar with (although this is more characteristic of the C1 and Y1 reports than it is of the A1 reports).	The B1 reports contain a similar proportion of subjective Pronouncement to the A1 reports. Like the A1 reports, they can function as deference politeness, and also as a way of including the authorial voice in order to defend a particular subjective stance.	Subjective Pronouncement in the C1 reports occurs to a slightly lesser extent than it does in the A1 and B1 reports, but fulfils the same functions.	The smallest proportion of subjective Pronouncement is found in the Y1 reports. This is because there is more emphasis on disclaimers than one finds in the reports for the other rating categories. Thus defending certain potentially contentious claims does not play as much of a role as it does in the reports for the main rating categories. They are more likely to be Entertained under Expansion.
	<b>Endorse</b>	The A1 reports have the greatest proportion of Endorsement compared to the reports for the B1, C1 and Y1 rating categories. Endorsement is used to show the reviewer's acceptance of the applicant's work and his/her standing in the community, by drawing on external voices or sources (and can therefore function as a deference politeness strategy). For a researcher in the A1 category, one would expect Endorsement to be a commonly used Engagement type.	In the B1, C1 and Y1 reports the proportion of Endorsement is smaller than it is for the A1 reports. Like the A1 reports, it can be used as a deference politeness strategy, as it construes evaluations as emanating from something other than the reviewer's subjective opinion. The strategy also indicates the author's alignment with the evaluation made and closes down space for alternative stances		
<b>Types of Attitude made Heteroglossic rather than Monoglossic</b>		Only very bold statements (e.g. that the applicant is <i>the top</i> scientist in the world) are indicated to be anything other than fact i.e. heteroglossic. Heteroglossia is also used occasionally to indicate	In the B1, C1 and Y1 reports, one does not find such 'bold' statements concerning the standing of the applicant and the quality of his/her work that one finds in the A1 reports. Engagement strategies are used for a variety of functions including: defending stances, hedging criticisms, making evaluations more/less tentative, and expressing deference and solidarity politeness.		

	uncertainty on the part of the reviewers, but never concerning the standing of the applicant or quality of his/her work.	
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**Table 6.17 Politeness in the Reports for the A1, B1, C1 and Y1 Rated Researchers**

	<b>Reports for the A1 Researchers</b>	<b>Reports for the B1 Researchers</b>	<b>Reports for the C1 Researchers</b>	<b>Reports for the Y1 Researchers</b>
<b>POLITENESS STRATEGIES</b>				
<b>Average Number of Instantiations per Report</b> (see Table 6.1)	8 instantiations per report.	11 instantiations per report.	10 instantiations per report.	15 instantiations per report.
<b>Role of Negative/Deference Politeness</b>	Deference politeness is used more frequently than solidarity politeness. It is used to avoid imposing certain evaluations or claims, should they not be considered ‘accepted fact’, upon the readers. It is also used to construe evaluations as being a matter of deduction rather than opinion. Overall, however, there is less deference politeness in the A1 reports than there is in the B1, C1 or Y1 reports, complementing the more ‘factual’ nature of the A1 reports. Subjective Pronouncement is also more likely to be used than Entertainment, complementing the more contractive nature of the reports.	Deference politeness occurs more often than solidarity politeness, and in the B1 reports, constitutes a greater proportion of the overall politeness than it does in the A1 reports. Like the A1 reports, it is used to avoid threatening the negative face of the readers and scientific community when estimating the standing of the applicant, and hedge criticisms which are perceived as open to contestation.	Deference politeness occurs more often than solidarity politeness, and in the C1 reports, constitutes a greater proportion of the overall politeness than it does in the A1 and B1 reports. Like the A1/B1 reports, it is used to avoid threatening the negative face of the readers and scientific community when estimating the standing of the applicant, and hedge criticisms which are perceived as open to contestation.	In the Y1 reports there is more politeness overall and, like the B1 and C1 reports, the majority of it is deference politeness. Again, deference politeness is used to avoid imposing claims concerning the standing and strengths and weakness of the applicant and his/her work on the reviewers. For a Y1 researcher at an earlier stage in his/her career, there is likely to be more perceived controversy over his/her standing and the quality of the work.
<b>Negative/Deference Politeness Strategies and Corresponding APPRAISAL Types</b> (see Table 6.12)	<b>Entertainment</b> is the most frequently employed APPRAISAL category. It is used to construe an evaluation as speculative, open to contestation, and only one of a variety of options. This protects the negative face of the readers and the scientific community as it avoids the imposition of construing their alignment as expected. <b>Subjective Pronouncement</b> is the next most frequently used type of APPRAISAL for deference politeness. By construing an evaluation as a personal belief rather than a fact, it is less threatening to the negative face of the readers and scientific community. Because subjective Pronouncement is more contractive than Entertainment (which falls under Expansion), it is generally used as a deference politeness strategies for positive evaluations, and Entertainment for negative ones. <b>Objective Pronouncement</b> is also used, although more in the A1 and B1 reports and less in the C1 and Y1 reports. This APPRAISAL category avoids threatening the negative face of the readers by construing an evaluation as a matter of logical deduction, and therefore ‘factual’ in this regard rather than depending on the acceptance of the community. Other APPRAISAL categories such as Appreciation, Disclaimers and Endorsement are used, but generally in conjunction with Entertainment and Pronouncement.			

<p><b>Role of Positive/Solidarity Politeness</b></p>	<p>Solidarity politeness is used in the A1 reports, sometimes to indicate that an evaluation is perceived as accepted and shared by the readers and scientific community. It is also used to avoid threatening the positive face of the scientific community which accepted the previous body of knowledge the applicant's groundbreaking work has modified or refuted. The latter function of solidarity politeness is found only in the A1 reports.</p>	<p>In the B1, C1 and Y1 reports, solidarity politeness is used to indicate that reviewers assume their readers are in agreement with their evaluations concerning the applicant's standing and work (i.e. solidarity politeness strategies project naturalised readers already aligned with the reviewer's stance). Sometimes this can usefully indicate values taken as 'given' within the community.</p>		
<p><b>Positive/Solidarity Politeness Strategies and APPRAISAL Correlates</b> (see Table 6.11)</p>	<p>Concur (particularly <b>Affirmation</b>) is the most common APPRAISAL type corresponding to solidarity politeness as it indicates perceived shared knowledge or Attitudes. <b>Appreciation</b>, the second most frequent APPRAISAL category used in instantiations of solidarity politeness has a similar function to Affirmation. Other APPRAISAL categories such as Attributions, Pronouncement and Endorsement are also occasionally used, generally in conjunction with Affirmation and Appreciation.</p>			
<p><b>Types of Evaluations Perceived as Face-Threatening and Redressed</b></p>	<p>It is significant that there are, on average, fewer instantiations of politeness per report in the reports for the A1 researchers. It is yet another indication that the status of the researcher (as a leader in his/her field and producing a sizeable body of excellent and highly influential work) is construed as being something that the reviewer does not perceive as being contentious or disputed in any way. This is further emphasised by the fact that there is more solidarity politeness than deference politeness in the A1 reports.</p>	<p>There are rather more politeness strategies on average in the B1 reports than there are in the A1 reports. Most are deference politeness and are used to show that certain evaluations are made with indications that the reviewers are taking the perceived stance of the readers and scientific community into account when making claims. Reader alignment is not taken for granted as readily as it is in the A1 reports.</p>	<p>The C1 reports have on average about the same number of politeness strategies as the B1 reports, but there is slightly less solidarity politeness in favour of deference politeness. More deference to the community is to be expected, considering the less definite status of the researcher within the community, and where there are more negative evaluations to be hedged. Reader alignment is not taken for granted as readily as it is in the A1 or B1 reports</p>	<p>Politeness is most prevalent in the Y1 reports: the reviewers place more emphasis on attending to the face of the readers and the scientific community than they do with the established researchers (A1s, B1s and C1s). The reviewers themselves appear generally to be established researchers themselves and so it is important that they preserve and pay proper respect to the existing scientific community, particularly in discussions concerning Y1 researchers in the process of being inducted into it.</p>

**Appendix 3 Tables 6.18 – 6.22. Summary of the Pertinent Features of the Reports for the A1, B1, C1 and Y1 Rating Categories, Arising from the APPRAISAL Analysis: Additional Guidelines for Members of the NRF Assessment Panel when Assigning Ratings**

**Table 6.18 Criteria for what Constitutes a ‘Good Scientist’ Worthy of an NRF Rating**

Criteria for what Constitutes a ‘Good Scientist’ Worthy of an NRF Rating	Relevant APPRAISAL Categories	Examples from the Reports for Researchers Rated in the A1, B1, C1 and Y1 Rated Categories.
1) The researcher must have produced a sizeable body of high quality personal and group research outputs.	Valuation, upscaled Force.	<p><b>A1:</b> *****’s research is of the <u>highest quality</u> (100; 210).</p> <p><b>B1:</b> <i>I believe</i> that the candidate’s research outputs over the last 7 years have been <u>excellent</u> (16; 251-252).</p> <p><b>C1:</b> His papers are of a <u>very high standard</u> (3; 116).</p> <p><b>Y1:</b> ...[has] <i>has produced work of very high quality, that would be very competitive anywhere in the world</i> (4; 88-89).</p>
2) The work must be original and innovative.	Normality, Valuation.	<p><b>A1:</b> ... <u>his unique scientific and technical approaches</u> (12; 92).</p> <p><b>B1:</b> ... <u>unlike other researchers in the field, he has done so from a variety of perspectives</u> (101; 132).</p> <p><b>C1:</b> <u>The unique and high quality of his research...</u>(102; 153).</p> <p><b>Y1:</b> <i>Her work ... was novel in the sense that prior to her studies, almost nothing was known about the endocrinology of this crustacean</i> (8;115-118).</p>
3) The work must have had a significant impact on the field (or even adjacent fields of research).	Valuation, upscaled Force.	<p><b>A1:</b> He has therefore <u>totally revised the world’s thinking about thermoregulation in mammals</u> (12; 112-113).</p> <p><b>B1:</b> He has produced a <u>significant body of cutting-edge papers, which have advanced the field not just regionally but internationally</u> (22; 10-12).</p> <p><b>C1:</b> [the work] <u>has generated some important advances in our understanding of how the regional ecosystems operate</u> (3; 70-71).</p> <p><b>Y1:</b> <i>Her results...have been so thorough and good that she has been able to refute long held hypotheses about brain cooling by some world famous physiologists</i> (4; 182-184).</p>

<p>4) The work must be published in the 'right' journals: high ranking international journals, some local journals, and those which circulate the knowledge to those who could most benefit from it.</p>	<p>Valuation, upscaled Force.</p>	<p><b>A1:</b> <i>He publishes a <u>wide range of papers</u>, some in the <u>best international journals</u>, some in <u>more local journals</u> (100; 79-80).</i></p> <p><b>B1:</b> <i>Prof. *** is publishing in <u>journals that highlight his work to scholars and members of industry and government in South Africa</u> and he is also <u>placing his work in a more general context</u> and reaching an <u>international audience in top journals</u> (22; 96-98).</i></p> <p><b>C1:</b> <i>The applicant <u>always publishes in highly ranked journals</u> (15; 95).</i></p> <p><b>Y1:</b> <i>The <u>quality of the journals</u> has been <u>very high</u> (7; 194).</i></p>
<p>5) The research methods employed should be rigorous, elegant and innovative.</p>	<p>Valuation, Composition.</p>	<p><b>A1:</b> <i>The <u>problem at hand is always clearly presented</u>, the <u>experimental approach always very good</u> and the <u>presentation of data is clear</u> (12; 209-210).</i></p> <p><b>B1:</b> <i>I <u>commend him in leading the way to using combined molecular, behavioral, physiological and field study methods</u> (101; 239-240).</i></p> <p><b>C1:</b> <i>She used <u>different methods</u> and <u>planned her toxicological experiments very precisely</u> (15; 78-79).</i></p> <p><b>Y1:</b> <i>The <u>proteomic techniques she uses are all state of the art</u>, and in particular, <u>her mastery of ... is impressive</u> (8; 120-121).</i></p>
<p>6) The researcher's work should be widely and frequently cited.</p>	<p>Reaction, Valuation.</p>	<p><b>A1:</b> <i>*****'s work is <u>as cited as any except the very few top marine scientists in the world</u> (100; 124).</i></p> <p><b>B1:</b> <i>...[his] <u>work is cited so well</u>, that... (16; 134-135).</i></p> <p><b>C1:</b> <i>[his work has had] <u>some good citation counts</u> (3; 108).</i></p> <p><b>Y1:</b> <i>[I] <u>have cited some of her work several times since it has gained international reputation</u> (8; 7).</i></p>
<p>7) The researcher should have extensive research collaboration networks and contact with the some of the top international researchers in their fields.</p>	<p>Valuation, Capacity, Tenacity.</p>	<p><b>A1:</b> <i>...<u>the qualities of the researchers under his leadership</u>, the <u>quality of the researchers with whom his group collaborates...</u> (12; 217-218).</i></p> <p><b>B1:</b> <i>A <u>highlight of the period under review is the continued development of collaborative relationships with leading researchers</u> (<u>world</u></i></p>

		<p><i>leaders</i> in some cases) (101; 18-20).</p> <p><b>C1:</b> ... the network of <i>established collaborative links</i> with scientists in several countries, scientists that are <i>in some cases</i> <i>leaders in the field</i> (15; 55-56).</p> <p><b>Y1:</b> The applicant has established some <i>exceptional collaborative relationships</i> (7; 203-204).</p>
8) The researcher should be efficient and productive.	Tenacity, Valuation.	<p><b>A1:</b> ...<i>his productivity ranks him right up there with the top ecologists in the world</i> (100; 78).</p> <p><b>B1:</b> Dr **** is currently <i>as active as he has ever been</i> (101; 279-280).</p> <p><b>C1:</b> **** has been <i>extremely productive</i> over the past 7 years (102; 36).</p> <p><b>Y1:</b> <i>I admire the skills and logistical organisation required for the type of work that Dr *** does</i> (4; 234-235).</p>
9) The researcher should have the ability to work independently and as part of a team. He/she should also demonstrate leadership abilities.	Valuation, Capacity, Tenacity.	<p><b>A1:</b> In addition to his <i>own high personal standing, he has organized and maintained a superb, internationally recognized group</i> (12; 304-305).</p> <p><b>B1:</b> <i>The existence of this group is probably also due to the work that he has done to promote the topic</i> (16; 69-70).</p> <p><b>C1:</b> <i>The work has continued to flourish with Prof ***... This shows that Prof *** has a leading role in the group</i> (3; 62-64).</p> <p><b>Y1:</b> [she] <i>managed very well herself or, if necessary, in collaboration with her supervisor Prof. ** and collaborators from abroad</i> (8; 34-35).</p>
10) The researcher should have presented his/her work at a variety of local and international conferences and meetings.	Valuation, Reaction, Capacity, Tenacity.	<p><b>A1:</b> <i>His presentations to scientists (whether juniors, peers or international experts) are always outstanding, as are his fascinating lectures to non-scientists</i> (100; 117-119).</p> <p><b>B1:</b> <i>He has represented the South African conservation community in many international conferences and research programs</i> (22; 111-112).</p> <p><b>C1:</b> <i>The applicant has been attending many international conferences</i> (15; 174-175).</p> <p><b>Y1:</b> <i>Most noteworthy is her impressive list of almost 40 conference contributions some of which</i></p>

		<i>were even invited talks</i> (8; 43-44).
11) The researcher should have an exceptional teaching and mentoring ethic, involving the supervision of graduate students and nurturing of junior scientists.	Capacity, Tenacity, Reaction, Valuation, upscaled Force.	<p><b>A1:</b> <i>I am impressed by the way in which he has nurtured younger scientists who are now becoming internationally known in their own right</i> (12; 251-253).</p> <p><b>B1:</b> <i>He's training a diverse group of students who also do well</i> (16; 144-145)</p> <p><b>C1:</b> <i>I observed her close contact to her students and her ability to guide them to successful own research</i> (15; 92-93).</p> <p><b>Y1:</b> <i>Her present teaching efforts are obviously most valuable to students, even more so since she appears to be especially engaged in helping students from disadvantaged backgrounds</i> (8; 51-52).</p>
12) There should be some orientation of the work to the cultivation of community development and service, and environmental conservation.	Propriety, Valuation.	<p><b>A1:</b> <i>This work has directly led into policy development to enable equitable access to resources</i> (100; 25).</p> <p><b>B1:</b> <i>His published studies include many of societal value, and also with economic benefits</i> (16; 92-93).</p> <p><b>C1:</b> <i>Additionally, his research on Babesia in dogs may well result in an animal model useful in the investigation of malaria in humans</i> (102; 47-48).</p> <p><b>Y1:</b> <i>Dr. *** has published a number of seminal papers that have shaped current policy formulation on conserving southern African antelope species</i> (7; 178-179).</p>
13) The researcher should have outstanding personal qualities such as: leadership ability, team spirit, integrity, humility, the ability to inspire and enthuse others about his/her research.	Normality, Capacity, Tenacity, Propriety, Reaction, Valuation, upscaled Force.	<p><b>A1:</b> <i>He is a charming individual, obviously highly intelligent, but also very approachable. Despite an enormous workload, he is kind and generous with his time and resources</i> (100; 90-91).</p> <p><b>B1:</b> <i>He has provided strong and ethical leadership</i> (16; 106-107).</p> <p><b>C1:</b> <i>... an insightful and industrious imager, with I suspect a great appreciation for his natural habitat...</i> (102; 212).</p> <p><b>Y1:</b> <i>Her positive attitude in developing their interest in biology and biological research in aspiring, but previously disadvantaged black South African students is truly excellent, and should not</i></p>

		<i>only be encouraged, but also rewarded</i> (8; 143-145).
14) The standing of the researcher is recognised by his/her peers as being at the top (or near the top) of his/her field, both locally and internationally.		<p><b>A1:</b> <i>Prof ***** is an <u>international level</u> scientist in the <u>top 5 - 10 in the world in his field</u></i> (100; 35).</p> <p><b>B1:</b> <i>The applicant is in a <u>top handful</u> of ecologists worldwide</i> (22; 155).</p> <p><b>C1:</b> <i>Nationally, in South Africa, ***** is <u>clearly the very best</u> there is in the field of diagnostic imaging</i> (102; 104).</p> <p><b>Y1:</b> <i>She can be regarded as a <u>leader in this particular field</u></i> (179-180).</p>

**Table 6.19 Features of the Reports for the A1 Rated Researchers Based on the APPRAISAL Analysis**

Features of the Reports for the A1 Rated Researchers	Relevant APPRAISAL /Politeness categories	Examples from the Reports
<p>1) The majority of the reports will be graded as ‘excellent’ (‘1’). The reviewers are generally very well-placed to provide a sufficiently detailed and informed assessment report. Almost all are well acquainted with the applicant, are very familiar with his/her work and have cited it. This alone is an indication that the applicant is someone well known in the community and with extensive networks and a large number of collaborative partners.</p>	<p><u>Attitude</u>: Capacity, Tenacity, Valuation.  <u>Graduation</u>: upscaled Force.  <u>Engagement</u>: monoglossia.</p>	<p><i>I say this from the perspective of also being one of the top marine ecologists in the world, and thus having an excellent sense of the magnitude, range and impact of his scientific activities at several levels</i> (100; 46-48);  <i>I am extremely well acquainted with Prof *** (12; 102);</i>  <i>I frequently cite ***’s work in my own research papers and reports.</i> (100; 254-255);  <i>I personally have known of and used ****’s papers for 25 years</i> (100; 196-197).</p>
<p>2) The reviewers may indicate that they have some familiarity with the NRF rating system. Some may even have provided reports for the applicant on previous occasions. This shows that the reviewers have some awareness of what an NRF rating entails in terms of rewards and prestige.</p>	<p><u>Attitude</u>: Capacity, Valuation.  <u>Graduation</u>: Force (Quantification).</p>	<p><i>I have previously evaluated Professor *** for NRF in January 2001</i> (12; 174);  <i>I have previously assessed **** for FRD on several occasions</i> (100; 8-9).</p>
<p>3) Reviewers make a palpable effort to show that they are well acquainted with the applicant and that they are in a position to provide a fair report. They may indicate that they have gone out of their way to read more of the applicant’s work for the sake of the review, have spent some time and effort on writing the report and showing in what capacity they know the applicant. Reviewers may</p>	<p><u>Attitude</u>: Capacity, Reaction, Valuation.  Graduation: upscaled Force.  <u>Engagement</u>: Some Contraction.  <u>Politeness</u>: some Deference.</p>	<p><i>I consider it a privilege to have been asked by the National Research Foundation to evaluate a marine scientist so hugely respected nationally and internationally as ****. My evaluation has therefore been thorough and has included careful reading of those research outputs listed by him as most significant in the past seven years as well as a random selection of others.</i> (100; 106-109).</p>

<p>also indicate that they feel 'privileged' or 'humbled' to act as reviewers for the A1 applicant.</p>		
<p>4) The opening paragraphs of the reports ('Knowledge of the Applicant') are significantly longer than they are for the reports for applicants rated in the B1, C1 and Y1 categories and constitute, on a average, a greater proportion of the reports (20%). In the A1 reports, they also often include evaluations of the applicant and his/her work, which belong in the second and third sections ('Appraisal of past research outputs' and 'Estimation of research outputs').</p>	<p><u>Attitude</u>: Reaction, Valuation, Tenacity, Capacity.  <u>Graduation</u>: upscaled Force.  <u>Engagement</u>: some Contraction.  <u>Politeness</u>: some Solidarity.</p>	<p>Opening sentence:  *** is <u>unquestionably one of the very top marine ecologists in the world, and is a major asset to the University of ..... and to South Africa</u> (100; 44-45);</p> <p>In the opening paragraph:  <u>I always admire(d) his broad and deep knowledge, his scientific contributions in both written and spoken form, and his leadership of a very productive group of younger scientists</u> (12; 8-10).</p>
<p>5) There are no criticisms or negative evaluations of the applicant whatsoever. The reviewers place the applicant at the very top of the field, above any other researchers mentioned, and often above the reviewers themselves.</p>	<p><u>Attitude</u>: Valuation, Tenacity.  <u>Graduation</u>: upscaled Force.</p>	<p><u>...the quality of it all humbles me, a fellow scientist</u> (100; 127-128);  ***** <u>has contributed more to substantive understanding of processes that drive dynamics of marine coastal systems than any other scientist in the world during the past 7 years</u> (100; 169-170);  Prof. *** <u>belongs to the absolute top relative to the peers in the field</u> (12; 363-364).</p>
<p>6) The positive evaluations are frequently strengthened or made more forceful. There is very little softening or weakening of evaluations.</p>	<p>All types of <u>Attitude</u> and <u>Graduation</u>.</p>	<p><u>...broad and deep knowledge</u> (12; 8-9);  <u>...boundless enthusiasm</u> (12; 114);  <u>...a fantastically successful and productive career</u> (100; 45-46);  <u>His impact today is astoundingly high</u> (100; 175).</p>

<p>7) The applicant is construed as a 'figurehead', well known in the community and representative of the field. His/her work forms a significant and canonical part of the recent literature.</p>	<p><u>Attitude</u>: Valuation.  <u>Graduation</u>: upscaled Force (sometimes figurative).  <u>Engagement</u>: some contraction.  <u>Politeness</u>: mostly Solidarity, some Deference.</p>	<p>**** is <i>nothing less than the "father" of modern marine ecology in South Africa</i> (100; 53);  ***** <i>undoubtedly is one of the spearheads of marine ecology in southern Africa</i> (100; 309);  <i>He is a giant</i> (12; 156);  <i>He is famous</i> (12; 157);  <i>Everyone who is working in this or a related research area will know him</i> (12; 313-314);  <i>His books too are masterpieces of coffee table excellence and academic reference value. Most people interested in the sea have copies of his books on their bookshelves, myself included</i> (100; 151-153);  <i>He commands the respect of physiologists all over the world</i> (12; 235-236).</p>
<p>8) The applicant is construed as a 'perfect scientist' embodying all the pertinent qualities (e.g. the work is elegant, novel and has a wide impact on science and society. The applicant is productive, successful, talented and an effective teacher and leader).</p>	<p>All types of <u>Attitude</u>, some upscaled/ sharpened <u>Graduation</u></p>	<p>All positive evaluations of the applicant exemplify this.</p>
<p>9) The applicant is likely to be a more senior researcher with a wealth of experience in the field. He/she is also likely already to have a host of accolades and awards, including previous NRF ratings.</p>	<p><u>Attitude</u>: Capacity, Tenacity, Valuation.  <u>Graduation</u>: upscaled Force.</p>	<p><i>He is currently at the peak of a fantastically successful and productive career</i> (100; 45-46);  <i>...decades of dedicated work on the South African coasts</i> (100; 312-313);  <i>I am extremely well acquainted with Prof ***, whom I have known, or known about, for almost 35 years</i> (12; 102-103);  <i>The grant from the Andrew Mellon foundation, for example, is a real feather in his cap</i> (100; 84-85).</p>

<p>10) The A1 reports seem more ‘factual’ than the B1, C1 or Y1 reports. This is because there is less overt presence of the reviewers’ individual voices, the effect being that the evaluations are construed less as subjective opinion, and more as incontestable fact. There is little speculation, or tentativeness on the part of the reviewers concerning the standing of the applicant or impact of his/her work. The reviewers are strongly committed to their evaluations of the applicant and seem to expect or assume agreement from the readers/scientific community.</p>	<p><u>Engagement</u>: all monoglossic evaluations, also contractive Heteroglossia and Solidarity <u>Politeness</u>.</p>	<p><i>The applicant obviously belongs to the <u>leading South African scientists</u> (12; 356-357);</i> <i>He is <u>clearly</u> the <u>most recognizable and important figure in marine ecology in South Africa and the continent of Africa</u>: that contention is <u>almost undebatable</u> (100; 195-196);</i> <i>His participation in marine policy has also had a <u>clearly important</u> and <u>large impact on the countries policies in fishery management</u>, especially with respect to invertebrate fisheries (100; 74-76).</i> <i>Prof *****’s <u>exceptional</u> research output and track record <u>speaks for itself</u> with little need for external commentary (12-13).</i> <i>For me, it is an example of the <u>creativity and scientific elegance</u> that, <u>in my opinion</u>, is difficult to match (285-286).</i></p>
<p>11) Any speculation or indications of uncertainty on the part of the reviewers concerns future ramifications of the applicant’s research (things they could not possibly know about for sure) rather than the applicant’s current status.</p>	<p><u>Graduation</u>: upscaled Force. <u>Engagement</u>: Entertainment. <u>Politeness</u>: Deference.</p>	<p><i>The <u>international reputation</u> of the applicant’s group within the field has continued to be <u>very high</u> and <u>this will most likely</u> also be the case in the future (12; 377-379).</i></p>
<p>12) Reviewers seem genuinely to like and admire the applicant and are excited by and interested in his/her work and research endeavours. They give their support and encouragement for any recognition or funding which the applicant might receive as a consequence of their NRF rating.</p>	<p><u>Attitude</u>: Reaction, Valuation. <u>Graduation</u>: Force <u>Engagement</u>: some Expansion. <u>Politeness</u>: Deference and Solidarity.</p>	<p><i>My guess is that <u>an editor who receives a paper from ***** rubs his hands in glee!</u> (100; 150-151);</i> <i>The scientific community will be <u>very pleased to learn that Professor *** plans to continue his research activities over the next five years at least</u> (12; 358-359);</i> <i>I have <u>no hesitation whatever in recommending Prof *** to you for the highest recognition that the NRF can bestow on a researcher</u> (12; 155-156);</i> <i>I <u>enthusiastically</u> encourage the foundation to support this South African centre of <u>excellence</u> to the <u>fullest</u> extent</i></p>

		<i>possible (12; 306-307).</i>
13) The applicant may well be the leader of a large, internationally recognised and respected research group. As a result, many of his/her colleagues or students working in the group are successful researchers in their own right, partly as a consequence of working with the applicant. The applicant is seen as an effective teacher and mentor, with exceptional people skills and organisational abilities.	<u>Attitude</u> : multiple-coding, Capacity, Tenacity, Valuation. <u>Graduation</u> : upscaled Force.	<i>... the <u>confidence he has instilled over the years in his students and collaborators, whom he has inspired to become world-class scientists in their own right</u> (12; 158-159); ...over the years ***** has <u>trained some superb PhD students and post-doctoral researchers. Many have gone on to senior positions at home and abroad</u> (100; 30-31).</i>
14) Additional evaluations of the applicant's personal qualities and character (not really a requirement of the reports) are found rather more often in the A1 reports than they are in the B1, C1 and Y1 reports.	<u>Attitude</u> : Reaction, Capacity, Tenacity. Propriety. <u>Graduation</u> : upscaled Force.	<i>I am <u>always impressed</u> by his <u>personal force and charisma</u>. He is a <u>charming individual, obviously highly intelligent, but also very approachable. Despite an enormous workload, he is kind and generous with his time and resources, and I suspect that his personality is a major source of his great success.</u> (100; 89-92).</i>

**Table 6.20 Features of the Reports for the B1 Rated Researchers Based on the APPRAISAL Analysis**

Features of the Reports for the B1 Rated Researchers	Relevant APPRAISAL /Politeness Categories	Examples from the Reports
<p>1) The B1 reports are, on average, significantly shorter than the reports for the other rating categories. They are also less ‘distinctive’, being neither tremendously complimentary (such as A1 reports) nor more critical (such as the C1 and Y1 reports). They are therefore recognisable as much for their lack of distinctiveness as for the evaluations they contain.</p>		
<p>2) Although a significant number of reports will be graded as ‘excellent’ (‘1’), there will be more graded as ‘excellent/satisfactory’ (‘1/2’) and ‘satisfactory’ (‘2’) than one finds in the suites of reports for the A1 rated researchers. This indicates that it is not as easy to find as many ‘excellent reviewers for a slightly less eminent and well known applicant. Not all the reviewers are very well acquainted with the applicant and his/her work.</p>	<p><u>Attitude</u>: Capacity, Valuation. <u>Graduation</u>: upscaled and some downscaled Force.</p>	<p><i>I know Prof *** <u>very well</u> and have done so for <u>many years</u> (16; 154); <u>I regard **** as a colleague and know him and his work well</u> (101; 4) <i>I am <u>reasonably familiar</u> with his word, although I cannot claim to have read <u>half of his papers</u> (101; 260); <i>I do not know Professor ***, and do not believe I have ever met him at a conference, although that might be possible (16; 275-276).</i></i></i></p>
<p>3) In the B1 reports, one sees slightly less effort made by the reviewers (compared to the A1 applicant) to claim acquaintance with the applicant. Reviewers are more confident to say that they are not overly familiar with the applicant’s work or have not cited it than they are for an A1 applicant. This indicates that the applicant is not a figurehead like the A1 applicant, and his/her work not so canonical in the field.</p>	<p><u>Attitude</u>: Capacity, Reaction, Valuation. <u>Graduation</u>: upscaling and downscaling of Force.</p>	<p><i>I am coauthor of <u>20 papers a year</u> - if I could answer the question of how many times I have cited this researchers multi-authored work I would need to have an <u>incredible memory</u> (22; 165-166); <i>I do not know Professor ***, and do not believe I have ever met him at a conference, although that might be possible (16; 275-276).</i></i></p>

<p>4) The opening paragraphs of the reports ('Knowledge of the Applicant') are generally much shorter than those for the A1, B1 and C1 reports, and constitute only a very small proportion of the report overall (13%). There may be some additional evaluations of the applicant's work and personal qualities, not required in this section and more characteristic of the A1 reports, but they are infrequent.</p>	<p><u>Attitude</u>: Valuation. <u>Graduation</u>: some upscaled Force.</p>	<p>Some additional evaluations (very rare): <i>As I will say later in more detail, the quality of this research is <u>extremely high</u> (22; 84-85);</i> <i>His book on insect conservation is <u>probably the most influential book</u> on that topic – as I shall write later, he's a <u>leading figure</u> in conservation worldwide (16; 157-158).</i></p>
<p>5) Unlike the A1 reports, only some of the reviewers need indicate that they believe the applicant to be an international leader in the field. Some of those that do make this claim, make it less assertively than they would in the A1 reports. It is more often construed as the personal opinion of the reviewer, and open to contestation.</p>	<p><u>Attitude</u>: Capacity, Valuation, Reaction. <u>Graduation</u>: Force (some downscaled). <u>Engagement</u>: Counters, subjective Pronouncement, Entertainment. <u>Politeness</u>: Deference</p>	<p><i><u>There can be no doubt</u> that *** is a leader in the South African national context in the field of conservation biology. He also has a <u>very well established international profile</u> and is <u>in my view considered an international leader</u> in his field (16; 175-176);</i> <i>he is <u>probably the leading figure internationally</u> (16; 65);</i> <i><u>I consider</u> Professor *** to be <u>among the dozen or so most highly regarded researchers</u> in conservation planning and biodiversity assessment (22; 23-24);</i> <i><u>If I were to rate</u> this researcher against Australian mid career conservation biology researchers <u>I would rate him about 5 out of 40</u> (22; 187-188).</i></p>
<p>6) Unlike the A1 applicant, the B1 applicant's work may not have had such a wide influence or impact on adjacent fields of research.</p>	<p><u>Attitude</u>: Valuation. <u>Graduation</u>: some downscaled Force. <u>Engagement</u>: <u>Politeness</u>: Deference.</p>	<p><i><u>I cannot comment</u> on ***' impact on his entomological community, <u>but he has had only a slight impact</u> on marine ecology (16; 299-300);</i></p>

<p>7) Some of the positive evaluations are rather more moderate than those found in the A1 reports.</p>	<p><u>Graduation</u>: less Graduation overall, some downscaling as well as upscaling.</p>	<p><i>His co-authors are often the best researchers in the field</i> (22; 126); <i>Almost all of ****'s other papers are in slightly lower ranking but still significant generalist journals of international standing</i> (101; 115-116).</p>
<p>8) Although, for the most part, the applicant does fulfil the criteria of what constitutes a 'good scientist', there are some negative evaluations of the applicant or his/her work. They are generally made more tentatively and politely than those found in the C1 and Y1 reports.</p>	<p><u>Attitude</u>: Valuation, Tenacity, Capacity. <u>Graduation</u>: Force (upscaling and downscaling). <u>Engagement</u>: Entertainment <u>Politeness</u>: Deference.</p>	<p><i>I think the quality is generally very high, but probably not earth-shattering</i> (22; 171-172); <i>However I would expect to see a top-class researcher demonstrating that he/she is providing the intellectual driving force for the laboratory's work by being first author on rather more papers than **** has demonstrated</i> (101; 376-377).</p>
<p>9) Reviewers do occasionally provide advice concerning how the applicant might improve the quality of his/her work. Advice in the B1 reports is, however, less common than it is in the C1 and Y1 reports, due to there being fewer criticisms overall. There is often juxtaposition of positive and negative evaluations in order to 'excuse' or make more polite a criticism. Explicit explanations, apologies and excuses for criticisms are also found in the B1 reports.</p>	<p><u>Attitude</u>: multiple-coding, simultaneous positive and negative evaluations. Valuation, Capacity, Tenacity. <u>Engagement</u>: Expansion. <u>Politeness</u>: Deference.</p>	<p><i>His conference papers show a heavy bias to African meetings, perhaps reflecting the reality of travel funding problems facing academics in South Africa</i> (101; 396-397); <i>Professor *** should be encouraged to aim at this more general literature; much of his work is worthy of publication here, and it would have a broader impact</i> (16; 60-61).</p>

<p>10) One does find some reports which are entirely positive and others which are more critical, showing that there is slightly more disagreement amongst reviewers concerning the quality of the applicant's work and its impact on the field than there is for the A1 researchers.</p>	<p><u>Attitude</u>: Valuation.  <u>Graduation</u>: upscaled/downscaled Force.  <u>Engagement</u>: some Expansion.  <u>Politeness</u>: some Deference.</p>	<p>For Applicant 16, reviewer 8 states: <i>...there are no papers in what I would consider to be Tier journals</i> (16; 293-294);  Reviewer 7, on the other hand states that the applicant's work is in <i>well regarded international journals</i> (16; 235).</p>
<p>11) Although less extreme than the A1 reports, the general impression is that the reviewers all like and admire the applicant and his/her work, and support his/her advancement in the field.</p>	<p><u>Attitude</u>: Reaction, Valuation, Capacity, Tenacity.  <u>Graduation</u>: Force (upscaled).</p>	<p>****'s work continues to be <i>interesting, exciting, and truly outstanding</i> (101; 100);  <i>It is always a pleasure to interact with ****</i> (101; 228);</p>

**Table 6.21 Features of the Reports for the C1 Rated Researchers Based on the APPRAISAL Analysis**

Features of the Reports for the C1 Rated Researchers	Relevant APPRAISAL /Politeness Categories	Examples from the Reports
<p>1) Although some of the reports for a C1 researcher will be graded as ‘excellent’ (‘1’) the majority will be graded as ‘excellent/satisfactory’ (‘1/2’). This indicates that the C1 applicant is less eminent and well known than the A1 and B1 applicants, and that it is more difficult to find ‘excellent’ reviews.</p>	<p><u>Attitude</u>: Capacity, Valuation. <u>Graduation</u>: upscaled and some downscaled Force.</p>	<p><i>I know the applicant personally and fairly well</i> (3; 142); <i>I don't know the applicant personally, but I have attended some conferences where I have heard aspects of the work presented there by ***</i> (15; 118-120); <i>I am familiar with **** only by reputation</i> (102; 263).</p>
<p>2) Some of the reviewers (only a few, but more than in the A1 and B1 reports) work in slightly different fields, are not overly familiar with the applicant’s work, and have not necessarily cited it. The reviewers are also less hesitant to say that they do not know the applicant or are unfamiliar with his/her work</p>	<p><u>Attitude</u>: Capacity, Reaction, Valuation. <u>Graduation</u>: some downscaled Force.</p>	<p><i>Due to our contrasting research foci, cross-citation is fairly limited, but by no means absent</i> (15; 227-228); <i>Working on different ecosystems I have not had the opportunity to cite much of the applicants work</i> (3; 245-246); <i>I have not cited his work because our areas of research and clinical publication do not overlap</i> (102; 265-266).</p>
<p>3) The applicant clearly meets nearly all the criteria for what constitutes a ‘good scientist’. However, there are rather more negative evaluations in the C1 reports and criticisms of the C1 applicant and his/her work than there are of the B1 applicants. Criticisms are made ‘politely’ and with more tentativeness than one finds in the Y1 reports, and the reviewers are more inclined to ‘excuse’ or ‘explain away’ the criticisms they make (this is found in the B1 reports too).</p>	<p><u>Attitude</u>: Valuation, Tenacity, Capacity, Reaction. <u>Graduation</u>: some downscaled Force. <u>Engagement</u>: Expansion. <u>Politeness</u>: Deference.</p>	<p><i>...a valuable if not unique contribution</i> (15; 41); <i>Her research is not supported by “high impact factor” journals, a fact that should not be held against her work</i> (15; 233-234); <i>The only weak point may be the lack of innovation in the approaches used</i> (3; 25); <i>He does not yet have the wider international profile that could be achieved based on his work over the last 7 years</i> (3; 133-134).</p>

<p>4) Reviewers for the C1 applicant, like those for the B1 and Y1 applicants do occasionally provide advice and suggestions. This is more frequent in the C1 reports than it is in the B1 reports, but less frequent than it is in the Y1 reports.</p>	<p><u>Attitude</u>: Capacity, Tenacity, Valuation. <u>Engagement</u>: Pronouncement, Entertainment. <u>Politeness</u>: Deference.</p>	<p><i>Although <u>the international community is aware of his work it will be valuable for the community for Prof *** to become more involved, if possible, in wider international programmes</u> (3; 123-124); Dr. *** <u>should diminish the importance of other directions of his scientific career and concentrate on estuarine ecology</u> (3; 379-380).</i></p>
<p>5) The reports appear less ‘factual’ than the A1 and B1 reports due to a more strongly explicit presence of the reviewers’ individual opinions.</p>	<p>Evoked <u>Attitude</u>. All typed of <u>Engagement</u>.</p>	<p><i>Her results <u>might also have impacts on agricultural practices</u> (15; 168); Prof *** <u>seems to be the major driving force behind the bulk of the publications listed</u> (15; 237); <u>The impression is that he has developed a leadership in his field</u> (3; 40); <u>The impact of this productivity is likely to be extensive in the field of diagnostic imaging in South Africa</u> (102; 38-39); <u>I find that he publishes in the most prestigious journals</u> (102; 58-59).</i></p>
<p>6) There is slightly more uncertainty and disagreement between reviewers concerning the local and international standing of the C1 applicant, compared to the A1 and B1 applicants. Whilst some reviewers place the applicant at the very top of the field, others are more reserved in their estimations.</p>	<p><u>Attitude</u>: Reaction, Valuation. <u>Graduation</u>: Force (upscaled/downscaled). <u>Engagement</u>: subjective Pronouncement, Entertainment. <u>Politeness</u>: Deference.</p>	<p><i><u>I believe Professor **** is one of the premier Veterinary Radiologists in the world</u> (102; 117); <u>I think it would be fair to say that he is the person the international imaging community would turn to seek advice or comment as a result of his published work in this area</u> (102; 365-367); <u>If I had to rank him among the Antarctic specialist of zooplankton, I would place him within the top 15%. If we extend the comparison to the entire world community he would still rank among the top 33%</u> (3; 36-38).</i></p>

<p>7) Evaluations are less forceful in the C1 reports compared to the A1 and B1 reports. Some of the positive evaluations are also less intense.</p>	<p><u>Graduation</u>: less overall, more downscaled Force.</p>	<p><i>Some of his papers are of a <u>very high standard</u> (3; 116);</i>  <i>Dr. ***'s research output is <u>quite impressive</u> (3; 310);</i>  <i>The material produced is <u>quite rigorously tested and evaluated</u> (102; 206-207);</i>  <i>His work on imaging of African wildlife is <u>almost unique</u> (102; 341).</i></p>
<p>8) Like all the reports (for the A1, B1 and Y1 researchers too), the reviewers appear to think well of the applicant, appreciate his/her work, and encourage his/her progress in the field. Evaluations such as these are less frequent and less forceful than they are in the A1 reports.</p>	<p><u>Attitude</u>: Valuation, Reaction, Capacity.  <u>Graduation</u>: upscaled Force.</p>	<p><i>I would like to give my <u>strong support</u> to this file of Dr. *** (3; 236-237);</i>  <i>I have with <u>great interest</u> read <u>most of the applicants work</u> (15; 191);</i>  <i>It has been a pleasure to have known *** since 1994 (102; 4).</i></p>

**Table 6.22 Features of the Reports for the Y1 Rated Researchers Based on the APPRAISAL Analysis**

Features of the Reports for the Y1 Rated Researchers	Relevant APPRAISAL/ Politeness Categories	Examples from the Reports
<p>1) It is not always possible to obtain reports that can be graded as ‘excellent’ (‘1’). The majority of the reports are likely to be graded as ‘satisfactory’ (‘2’). This is an indication that the Y1 applicant is generally less well known in the community than the more established researchers (rated in the A1, B1 and C1 rating categories) and so finding suitable reviewers is rather more difficult. Not all the reviewers are very familiar with the applicant’s work or have cited it, and they are not reluctant to say so.</p>	<p><u>Attitude</u>: Capacity (self-evaluations), Reaction, Valuation.</p>	<p><i><u>I do not know Dr. *** personally, and I do not recollect having heard her talk</u></i> (4; 95);</p> <p><i><u>I have read her work prior to your request, and have used it in the development of my own thinking about lion phylogeography</u></i> (7; 100-101);</p> <p><i><u>I do not know the applicant nor do I have any experience with the applicant except that I did handle one paper on which she is a co-author</u></i> (7; 189-190);</p> <p><i><u>I have not attended any of the conferences where her work was presented, nor have I cited her work because it is not directly relevant to my own</u></i> (7; 257-258);</p> <p><i><u>I do not know Dr *** personally, nor have I encountered her work at conferences, although I am familiar with the field in which she investigates</u></i> (8; 247-248).</p>
<p>2) Significantly, some of the reviewers, rather than being true peers of the applicant, are more senior researchers, such as former supervisors or external examiners. This is not unexpected, considering that the Y1 researcher is at an early stage in his/her career and does not yet have the international networks a more experienced researcher may have.</p>	<p><u>Attitude</u>: Capacity (self-evaluations), Valuation.</p>	<p><i><u>I have known Dr *** since I supervised one of her Honours projects in 1995</u></i> (4; 4);</p> <p><i><u>I was an external examiner for the Witwatersrand Honours Class in 1995 when the applicant was a candidate</u></i> (4; 163-164);</p> <p><i><u>I have known *** since 2000, and I was also one of the external assessors of her PhD thesis</u></i> (8; 104).</p>

<p>3) The opening paragraphs of the reports ('Knowledge of the Applicant') constitute a significantly smaller proportion (12%) of the reports overall than they do for the A1, B1 and C1 categories. Additional evaluations of the applicant's work and personal qualities that are found particularly in the A1 reports are rarely found in the Y1 reports and, unlike the A1 reports, may (but are not always) be negative.</p>	<p><u>Attitude</u>: Capacity, Tenacity, Reaction, Valuation.  <u>Graduation</u>: Force.  <u>Engagement</u>: some Disclaimers, Pronouncement, Entertainment.  <u>Politeness</u>: some Deference.</p>	<p><i>I have seen her develop from a somewhat reserved but persistent student to a productive scientist of very high standard (4; 4-6); Please note that I did not solicit her participation, rather, her colleague and Ph.D. advisor Dr. Mitchell suggested that I ask her. This is not necessarily a bad thing, but it reflects a point in my appraisal that suggests that Dr. *** has not yet, in her own right, attained scientific independence and maturity (4; 97-100).</i></p>
<p>4) Reviewers make less of an effort to claim acquaintance with the applicant (such as taking the time to read up on the applicant's work) than they do with the A1 and B1 researchers. There appears to be less of an incentive to act as a reviewer for the Y1 applicants than there is for the more established researchers.</p>	<p><u>Attitude</u>: Capacity, Reaction, Valuation.  <u>Graduation</u>: some Force.  <u>Engagement</u>: Expansion.</p>	<p><i>I do not recollect whether I have cited her work, and have not checked so (100; 102); I have read several of the applicant's publications, largely because I follow [her supervisor's] work. (8; 154-155).</i></p>
<p>5) Positive evaluations are sometimes made with indications of uncertainty on the part of the reviewers, due to lack of familiarity with an aspect of the applicant's work.</p>	<p><u>Attitude</u>: Capacity, Tenacity, Valuation.  <u>Graduation</u>: downscaled Force.  <u>Engagement</u>: Entertainment.  <u>Politeness</u>: Deference.</p>	<p><i>I am not really able to comment on Dr ***'s research standing relative to her peers within South Africa. But, I would think that she must be doing quite well (4; 264-265); In some instances the [applicant's] inputs were probably minimal, while in others, the applicant probably contributed equally, or to a greater extent, relative to the other authors (7; 22-24); ...one would regard Dr. *** as a reasonably productive researcher (8; 169-170).</i></p>

<p>6) Although there are a great deal of very positive evaluations of the applicant, there are more criticisms compared to the A1, B1 and C1 reports.</p>	<p><u>Attitude</u>: Valuation, Reaction.  <u>Graduation</u>: some downscaled Force.  <u>Engagement</u>: Pronouncement.  <u>Politeness</u>: Deference.</p>	<p><i>I do not think that Dr. *** has yet reached the position of <u>international stature</u> that she aspires to (4; 139); Her work on Duikers is a bit underexposed, I think...22 citations in 7 years is <u>not very high</u> (7; 147-148); ...this makes her a <u>superb technician</u>, rather than a good researcher (8; 174-175).</i></p>
<p>7) Although the Y1 applicant is, to an extent, compared to the more established researchers in the A1, B1 and C1 categories i.e. the ideal ‘good scientist’, rather different criteria are used in rating a Y1 applicant.  Firstly, the emphasis is on demonstrated potential rather than the accomplishments of a 7-year period i.e. there is as much emphasis on future possibilities as there is on past accomplishments.</p>	<p><u>Attitude</u>: Capacity, Valuation.  <u>Graduation</u>: some upscaled Force.  <u>Engagement</u>: Pronouncement.  <u>Politeness</u>: Deference.</p>	<p><i>I believe that she has the potential to become an established researcher who will make an <u>outstanding contribution in science in South Africa</u> (7; 36-37); In the national comparison I think she has the potential to belong to the <u>top level within some time</u> (7; 89-90); ...the fact that she is a good collaborator places her in a good position for <u>key research in the future</u> (4; 44-45).</i></p>
<p>8) Secondly, although there are more negative evaluations in the Y1 reports than there are in the A1, B1 and C1 reports, reviewers are generally more generous in their assessments of the Y1 applicants. Criticisms are not generally meant to be detrimental and are frequently made ‘politely’, tentatively and together with advice and suggestions. Presumably, reviewers do not wish to threaten the face of those inducting the applicant into the community (such as the</p>	<p><u>Attitude</u>: Capacity, Tenacity, Reaction, Valuation.  <u>Graduation</u>: Force (upscaled and downscaled).  <u>Engagement</u>: Entertainment, Pronouncement.  <u>Politeness</u>: Deference.</p>	<p><i>On one hand, it suggests that Dr. *** perhaps does not yet function entirely independently. However, on the other hand, it is possible that her PhD thesis advisor does not realize how important it is for upcoming scientists to prove their independence (4; 113-116); Dr. *** would do well to broaden her horizons by spending a period of post-doctoral training in an excellent laboratory the US or Europe. She might also consider participation in international meetings attended by</i></p>

<p>supervisor), but wish to protect the community by encouraging and providing advice to the applicant. More advice is found in the Y1 reports than in any of the others.</p>		<p><i>the world's <u>foremost</u> physiologists</i> (4; 150-152);  <i>The applicant <u>should</u> be <u>encouraged</u> to initiate research independent of her previous and current mentors</i> (7; 152-153);  <i>I would recommend that Dr *** be given the opportunity to develop her own ideas independently</i> (8; 291-292).</p>
<p>9) Because they Y1 applicant is aspiring to become an established, internationally recognised researcher, but is still at an early stage in his/her career, there is more emphasis in the Y1 reports on how far the applicant is working independently of his/her supervisors and how much input he/she has in group projects. Independence and originality of research is a very pertinent part of the Y1 reports.</p>	<p><u>Attitude</u>: Capacity, Tenacity, Composition, Valuation.  <u>Engagement</u>: Expansion, Pronouncement.  <u>Politeness</u>: Deference.</p>	<p><i>There is <u>no</u> information showing what Dr. ***'s role was in each of these group efforts, and if she really has the leadership qualities that she purports to have</i> (4; 116-118);  <i>...having worked with this group, I know each member plays a vital role and her's is no exception</i> (4; 189);  <i>...it is unclear to what extent she is now working independently from him as mentor</i> (7; 32-33);  <i>Clearly she is able to work with teams within other disciplines, and internationally, but to what extent she has driven the research or been the guiding influence remains unclear</i> (8; 261-263).</p>
<p>10) There is a little more disagreement amongst reviewers concerning what the applicant's weaknesses are, and his/her standing within the community, than there is in the A1, B1 or C1 reports.</p>	<p><u>Attitude</u>: Valuation.  <u>Graduation</u>: some downscaled Force.  <u>Engagement</u>: Pronouncement, Entertainment.  <u>Politeness</u>: Deference.</p>	<p><i>...she can be regarded as a leader in this particular field</i> (7; 179-180);  <i>Dr. *** is a leading crustacean endocrinologist on the world scale. Her work can be compared to that of any other researcher in this field worldwide</i> (8; 237-238);  <i>Her current standing is probably moderate relative to peers in the field at both national and international levels</i> (7; 239-240);</p>

		<p><i>I do not think that Dr. *** has yet reached the position of <u>international stature that she aspires to</u> (4; 139).</i></p>
<p>11) In a community where there is intense competition for funding and opportunities to carry out research overseas or with prominent researchers in the field, awards and funding the Y1 applicant has received is a useful indicator of the recognition and acceptance he/she has already received from the community.</p>	<p><u>Attitude</u>: Valuation, Reaction.</p>	<p><i>The awards Dr *** has amassed are <u>quite remarkable</u> (4; 26-27); She became <u>a fellow of the Alexander von Humboldt Stiftung, a precious award from Germany to well selected scientists from abroad</u> (8; 54-55).</i></p>
<p>12) Despite the criticisms, the general reaction towards the Y1 applicant is very positive. Reviewers seem genuinely interested in the applicant's future prospects. Whereas in the A1 reports, there is more of a sense of awe and respect towards the applicant, in the Y1 reports there is more of a sense of anticipation and encouragement.</p>	<p><u>Attitude</u>: Normality, Tenacity, Capacity, Reaction, Valuation.  <u>Graduation</u>: upscaled Force.  <u>Engagement</u>: Affirmation, Pronouncement.  <u>Politeness</u>: Deference and Solidarity.</p>	<p><i>South Africa is fortunate to have <u>scientists of her ability content to work here when so many of our young talented scientists are emigrating</u> (4; 211-213);  <u>I am optimistic that Dr. *** will also in the future make important contributions to thriving research areas</u> (7; 93-94);  The applicant has established some <u>exceptional collaborative relationships that will no doubt lead to exciting future work</u> (7; 203-204);  Dr ***'s <u>undoubted success is related to her amazing ability to network effectively, and pick up techniques from others with enviable speed</u> (8; 118-120).</i></p>

# **The Role of APPRAISAL in the National Research Foundation (NRF) Rating System: Evaluation and Instruction in Peer Reviewer Reports**

**Volume 2**

A thesis submitted in fulfilment of the requirements for the degree of  
Master of Arts

**Rhodes University**

By

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### Formatting conventions (see also Chapter 3, section 3.4.1.1)

**Attitude:** underlined

**Graduation:** pale font

**Engagement:** shaded

**Line numbers:** In each suite of reports, line numbers start at the beginning of report 1 and run to the end of the final report. Quoted instantiations therefore to include the applicant number followed by the line number, for example:

- *Prof\*\*\*...is an eminent research scientist (12;4)*

## Appendix 4 Application for Evaluation and Rating

[<http://evaluation.nrf.ac.za/Content/Documents/Documents.htm>, accessed February 2008]

# NATIONAL RESEARCH FOUNDATION

## APPLICATION FOR EVALUATION AND RATING: 2009

Monitoring & Evaluation  
PO Box 2600  
PRETORIA  
0001

Telephone: 012 481-4106  
Telefax: 012 481-4010  
Email: [supportdesk@nrf.ac.za](mailto:supportdesk@nrf.ac.za)  
Online applications:


<http://nrfonline.nrf.ac.za>

Internet:

<http://www.nrf.ac.za/evaluation>

**NRF Closing Date: 27 February 2009**

### Please note the following important points:

- **This is a downloadable copy only to assist applicants with the information required to complete their applications. This document is not suitable for submission (either by email, post or fax). The only valid application will be an online application.**
- The online submission system will be accessible from 1 September 2008 at <http://nrfonline.nrf.ac.za>
- The document 'Guidelines and instructions for completing the application for evaluation and rating' contains detailed guidelines and instructions for completing the online application for evaluation and rating. This document may be accessed at <http://www.nrf.ac.za/evaluation/content/evaluation/apply.htm> and **MUST** be consulted before completing the application. It is advisable that this document is printed and kept close at hand for easy reference, while working on the online application.
- Actual research outputs must not be submitted to the NRF, but must be made available upon request.
- Applicants are advised that should they be successful in obtaining an NRF rating the result will be published on the NRF website.
- Applicants must ensure that they adhere to their own institution's internal deadlines.
- Applications must be submitted in English. Translations will not be done by the NRF.
- Those applications which are not fully and correctly completed will not be processed.
- The print preview version of the online application should not exceed 27 pages.
- A  denotes that this field is compulsory when completing the information on the online system.
- The NRF's Support Desk can be contacted by telephone (012 481-4202) or by email ([supportdesk@nrf.ac.za](mailto:supportdesk@nrf.ac.za)).

More information on applying for rating may be accessed at <http://www.nrf.ac.za/evaluation/content/evaluation/apply.htm>.

### 1. APPLICATION INFORMATION

Institution submitting application	(select institution from dropdown list)
Type of evaluation application	(system generated)
Closing date	(system generated)
Do you agree with the information displayed above?	(Yes/No, if no, why not?)

## 2. PARTICULARS OF APPLICANT

Title	
Name	
Initials	
Surname	
Maiden name	
Identification number <sup>1</sup>	
Current organisation	
Citizenship	

## 3. ADDITIONAL DETAILS

Date of birth	
Gender <sup>2</sup>	
Race <sup>2</sup>	
Highest qualification (e.g. PhD, MSc etc.)	
Year obtained	
Title of thesis ( if PhD was awarded in the last five years)	

<sup>1</sup> If not in possession of a South African identity number please provide a national identity or passport number/type for the citizenship indicated.

<sup>2</sup> The NRF has embarked on corrective action activities and in its reporting is obliged to reflect its investment in this regard.

## 4. CONTACT DETAILS

Organisation where based	
Faculty or School	
Primary organisation which funds your salary	
Is this a Full-time/Part-time/Permanent/ Temporary/Fixed period contract position?	
Department	
Work telephone number code	
Work telephone number	
Work fax number code	
Work fax number	
Mobile number	
Email address	
Website address	

## 5. WORK POSTAL ADDRESS

Please do not include institution name or department here.

Organisation Address	
City	
Code	
Province or State	
Country	

## 6. QUALIFICATIONS

Please fill in **all** your qualifications (your **entire** qualifications history), i.e. list your diplomas and/or degrees (e.g. BSc, MSc etc.) obtained and those for which you are currently registered for. **Please ensure that the level and the degree are the same, e.g. Masters (level) and MSc (degree).**

Degree/ Diploma	Field of study	Institution	Year obtained	Distinction (y/n)	Completed (y/n)
				(y/n)	(y/n)

## 7. CAREER PROFILE

Please list all the positions you have held in the past (including non-academic positions where applicable), as well as your current position.

**Note:** Should you select 'Yes' from the dropdown list for your current position, the 'Period to' field will not be displayed.

Position	Organisation	Full-time/ part-time	Contract position	From	To	Current**
			(y/n)			(y/n)

\*\* For your current position, the 'Period to' is not required

## 8. RESEARCH EXPERTISE

### 8.1 Scientific Domain

Select only one scientific domain from the list provided.

Health and Medical Sciences
Inter-domain
Natural Sciences and Engineering
Social Sciences and Humanities

Scientific domain	
-------------------	--

### 8.2 Primary research level(s)

Select at least **one** but not more than **three** fields (in order of priority) from the list provided below which most appropriately reflect your primary level(s) of research.

Agricultural sciences	Information & computer science
Arts	Law
Biological sciences	Mathematical sciences
Chemical sciences	Medical sciences: basic
Earth and marine sciences	Medical sciences: clinical
Economic sciences	Physical sciences
Engineering sciences	Social sciences
Health sciences	Technologies & applied sciences
Humanities	

Primary level(s)

1.
2.
3.

### 8.3 Secondary research level(s)

Select at least **one** but not more than **four** fields (in order of priority) from the list provided below which most appropriately reflect your secondary level(s) of research.

Accounting	Aerospace and aeronautical engineering	Agricultural economics
Agricultural management	Agriculture	Agrometeorology
Agricultural engineering	Analytical chemistry	Anatomical pathology
Anaesthesia and pain management	Animal production	Anthropology
Anatomical sciences	Archaeology	Architecture
Applied mathematics	Astronomy	Atmospheric science and meteorology
Artificial intelligence	Automotive engineering	Biochemistry
Atomic, molecular and nuclear physics	Biology	Biometrics
Bio-engineering	Biostatistics	Biotechnology
Biophysics	Business administration	Business economics
Botany	Chemical engineering	Chemical pathology

Cardiovascular diseases	Civil engineering	Civil procedure and courts
Chemistry	Communication and media studies (incl. Journalism)	Communication technologies
Classics	Computer multimedia systems	Computer programming
Computer hardware	Computer software	Constitutional and administrative law
Computer science	Criminal law	Criminology
Construction industry and building	Customary law	Decorative arts
Cultural studies	Dental sciences	Dermatology
Demography	Development studies	Diabetology
Design studies	Ecology and environmental science	Economics
Dramatic arts	Electrical engineering	Electronic engineering
Education	Endocrinology	Engineering
Embryology and fetal development	Environmental health	Environmental studies
Engineering management	Financial management	Fine arts
Epidemiology, incl. burden of disease	Food sciences and technology	Forensic sciences
Fisheries	Fresh water biology and limnology	Game ranching and farming
Forest science	General practice	Genetics
Gastrointestinal diseases	Geochemistry	Geology
Genito-urinary diseases (incl. Urology)	Geriatrics	Gynaecology
Geospace physics	Health informatics	Health promotion and disease prevention
Geophysics	Health technology	Historical studies
Haematology	Horticulture	Human geography
Health systems research	Immunology	Industrial design
Home economics	Industrial psychology and sociology	Infectious diseases
Hydrology	Information systems and technologies	Inorganic chemistry
Industrial engineering	International law	Jurisprudence
Information and library science	Languages and literature	Laws (Statutes), regulations, cases
Intensive care	Linguistics	Management
Labour, social service, education and cultural law	Marine biology	Marine engineering and navel architecture
Legal history	Material sciences and technologies	Mathematics
Manufacturing and process technologies	Medical technologies	Medical virology
Marketing	Metabolic diseases	Metallurgical engineering
Mechanical engineering	Military and defense law	Mining engineering
Mental health and substance abuse	Morphology	Musicology
Microbiology	Neuroscience	Nuclear engineering
Molecular and cell biology	Nursing science	Nutrition
Neurology	Obstetrics and maternal health	Oceanology
Nuclear medicine and organ imaging	Operations research	Ophthalmology
Nutrition and metabolism	Orthopaedics	Other information and computer technologies
Oncology	Paediatrics and child health	Painting
Palaeontology	Organic chemistry	Otorhinolaryngology
Particle and plasma physics	Performing arts	Pharmaceutical sciences
Phenomenological physics (incl. Acoustics, optics, magnetism and electricity)	Philosophy	Photography
Political sciences and public policy	Physical geography	Physics
Physical chemistry	Plant production	Podiatry
Physiology	Private law	Psychiatry

Polymer science	Public law	Quantity surveying
Psychology	Religious legal systems	Religious studies
	Rheumatology	Sculpture
Rehabilitation medicine	Science and state	
Respiratory diseases	Sociology	Soil and water sciences
Social work	Sports and recreational arts	Sports medicine
Space and earth science	Surgery	Tax law
Statistics and probability	Theology	Theoretical and condensed matter physics
Trade and commerce law	Town and regional planning	Toxicology
Tourism	Theatre	Trade and commerce
Trauma	Veterinary science	Wood science
Zoology		

Secondary research level(s)

1.
2.
3.
4.

#### 8.4 Fields of specialisation

Please include at least **one** but not more than **ten** specialisation fields in order of priority (one specialisation per line).

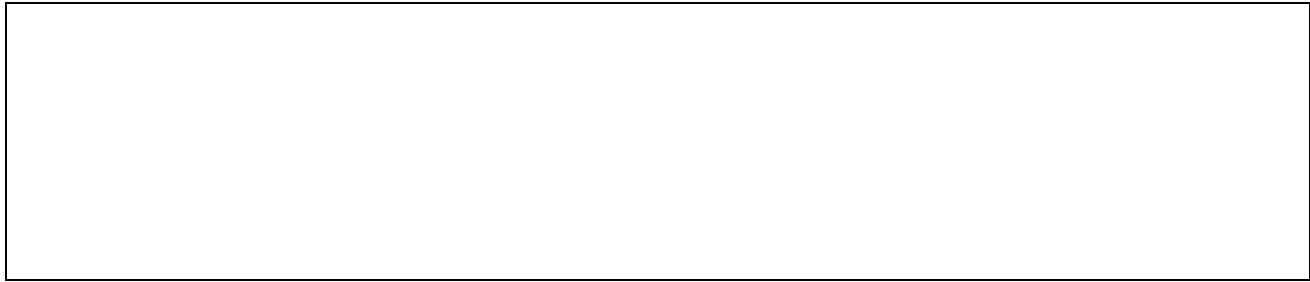
1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

#### 9. BIOGRAPHIC INFORMATION

A brief biographical sketch **must** be provided. Provide a brief biographical sketch (**not in bullet form**) giving information not already provided elsewhere in the application.

- The introduction must be written as a narrative and could include a short overview of where, in terms of research, you have come from, in what you are interested (in very broad terms) and where you are now.
- Mention should be made of awards and prizes, membership of editorial boards, membership of national and international scientific committees, and other tangible recognition you have. (The latter could include citations, names of journals for which you have been invited to act as reviewer, etc.). This will enable reviewers to obtain some perspective on you and to assess your major awards and recognition.

The biographical information should not exceed 5 500 characters including spaces (equivalent to one A4 page, Arial font size 10). **Note:** Carriage returns are counted as two characters.



## 10. RESEARCH OUTPUTS

### Important issues regarding research outputs

- Please provide full references of your **research** outputs under the headings (Items 10.1 – 10.5.5) below.
- Include (if available) a web address from where these outputs can be easily accessed by your reviewers. (**Note:** it is illegal to place outputs with a copyright owned by a journal/conference etc. in the public domain without its permission. If you do not have permission to place outputs on your website, try and obtain permission to insert a link to the output on the copyright owner's website.)
- It is important to note that the assessment period for which research outputs will be considered for evaluation is 8 years, which, for the current closing date (i.e. 27 February 2009), is defined as **1 January 2001 to 31 December 2008**. However, you are also given the opportunity to include your ten best research outputs before 2001.
- A separate entry should be completed for each research output.
- When indicating the number of times an output has been cited, clearly indicate the number of self citations.
- **Where more than one person has contributed to the research outputs you have listed you must indicate your own contribution to the team effort in this section.** (also see section 16: 'Self-Assessment of Research Outputs').
- Repetition/duplication of outputs (e.g. as a conference proceeding and a journal article) is strongly discouraged.
- Any outputs that have not yet been published/produced, (i.e. those '*in press*' or '*accepted*' or '*submitted*') **must NOT BE** included as research outputs in the period under review. These should be included in the section on 'Ongoing and planned future research'.

### 10.1 Books/Chapters in Books

- For each book please provide the date of publication and the author(s). In the 'Reference' section the title, number of pages, place of publication, publisher and ISBN number must be provided.
- Chapters in books should be listed according to date of publication and author(s) of the chapter. In the 'Reference' section the title of the chapter, page numbers of chapter, title of book, name(s) of editor(s), place of publication, publisher, ISBN number must be given.
- **Do not include in any contributions to conferences that have been published in book form this section.**

Type	
Year	
Author(s)	
Reference	
Web address where output can be accessed	
Indicate own contribution if output is multi-authored	

### 10.2 Refereed/Peer-reviewed Articles in Journals

- Give full references i.e. authors, title of article, name of journal, year, volume, numbers, and start page-end page, [e.g. *Wiehart UIM, Nicolson SW, Eigenheer RA and Schooley DA. Antagonistic control of fluid secretion by the Malpighian tubules of Tenebrio molitor: effects of diuretic and antidiuretic peptides and their second messengers. J. exp. Biol. 2002, 205: 493-501*].
- It is very important that full references are given and that only refereed/peer-reviewed articles in journals are listed here. Authors of publications should be listed by name in the correct sequence (i.e. the sequence in which they appear in the published article).
- After entering the year and authors in the respective fields please capture the remaining part of the reference in the 'Description' box.

Year	
Author(s)	
Description	
Web address where output can be accessed	
Indicate own contribution if output is multi-authored	

### 10.3 Conference outputs

Contributions to conferences that have been published in book form must be included in this section and **not** in section 10.1- Books/Chapters in books.

#### 10.3.1 Refereed/Peer-reviewed Conference Proceedings

- **Only** published conference proceedings that have been **subjected to a rigorous and full refereeing/peer-review process** must be included here. All authors of publications in refereed/peer-reviewed conference proceedings indicated in this section must be listed by name in the correct sequence. In the Reference section the title, the title of the conference proceeding, (the volume, number, start page-end page) must be supplied. **Do not include peer-reviewed published abstracts (nor published conference proceedings that have not been subjected to a rigorous and full refereeing/peer-review process).**

#### 10.3.2 Other significant conference outputs

These could include published conference proceedings that are not peer-reviewed as well as published abstracts of conference proceedings that are peer-reviewed. Do not provide an exhaustive list of your conference outputs but **rather be selective** and include **only** the **best** other significant conference outputs from which there were published outputs that may be assessed by your reviewers as **enhancing your research status**.

Type	
Year	
Author(s)	
Reference	
Web address where output can be accessed	
Indicate own contribution if output is multi-authored	

### 10.4 Patents

The following information must be provided for each patent:

- The type of application (provisional patent application, complete patent application (including PCT application) or granted patent), date of application/grant, title, inventor(s)/authors, applicant/assignee, country, patent application/patent number, and
- An abstract (summary) of the invention including a brief statement not exceeding 2 750 characters including spaces (half an A4 page, Arial font size 10) describing the unmet market need that the invention addresses. (**Note:** Carriage returns are counted as two characters.)

<b>Type of Patent Application</b>	Dropdown with the following choices please: 1) Provisional patent application 2) Complete patent application (including PCT application) 3) Granted patent
<b>Date of Application/Grant</b>	
<b>Title</b>	
<b>Inventor(s)/Author(s)</b>	
<b>Applicant/Assignee</b>	
<b>Country</b>	
<b>Patent Application/ Patent Number</b>	
<b>Abstract &amp; description of unmet market needs</b>	

## 10.5 Additional research outputs

The description for each of the research outputs listed below (10.5.1 – 10.5.5) should be succinct, (i.e. not exceed 2 750 characters including spaces (equivalent to half an A4 page, Arial font size 10). (Note: Carriage returns are counted as two characters.) Please provide sufficient detail on the research achievements for peer reviewers to give an informed opinion.

### 10.5.1 Product/Artefact/Prototype

Please provide a description of the product/artefact/prototype as well as the author(s) and relevant references.

### 10.5.2 Technical/Policy Reports

- List **only** those reports available in the public domain that you believe may be assessed by your reviewers as **enhancing** your research status.
- Please include appropriate references for technical and policy reports and Include (if available) a web address from where these outputs can be easily accessed by your reviewers.

### 10.5.3 Keynote and Plenary Addresses

- Please include appropriate descriptions of keynote and plenary addresses (keynote/plenary addresses refer to occasions where research is presented to peers at high level international conferences/symposia etc).
- **Do not** include addresses to secondary/high school students, lectures in local/foreign institutions, etc. as this is not viewed favourably.

### 10.5.4 Other Recognised Research Outputs

- These include any other **measurable research outputs** that clearly embody new or substantially developed insights, for example, annotated bibliographies, catalogues, musical scores, paintings, contributions to major research databases, development and production of software, dictionaries, electronic publications, plant-breeding rights, research guides, scholarly editions, vaccines, etc.
- For all these research outputs concise descriptions must be included with particular reference to the contribution to new knowledge and insights.

### 10.5.5 Articles in non refereed/non peer-reviewed journals

Only include non refereed/non peer-reviewed journals in this section that may be accessible to your reviewers and assessed by them as **enhancing your research status**.

Ensure that only one item is entered at a time.

Type	
Year	
Author(s)	
Reference/ Description	
Web address where output can be accessed	
Indicate own contribution if output is multi-authored	

## 11. BEST RESEARCH OUTPUTS IN THE PAST 8 YEARS

Once you have entered your research outputs in 'Section 1' (items 10.1 – 10.5.5 above), complete the section 'Best research outputs in last 8 years' and click on the 'Add' button at the bottom of the screen.

- This will provide you with a combined list of your research outputs of the past 8 years which you entered in 'Section 1' (items 10.1 – 10.5.5 above).
- From this combined list of recent research outputs, identify and indicate **not more than five** outputs that you consider to be your best during the assessment period. For each of these selected entries, give brief reasons, in no more than one sentence ( $\pm$  800 characters, including spaces), for your choice. For example: 115 citations since 2002; a novel method or new direction in the field; invited to deliver keynote addresses in Chicago and London on these research findings; top-ranked journal in the field with an impact factor of 3.25; most prestigious conference in my field; exhibited in major galleries around the world, etc.
- Once you have identified your best research outputs and entered a motivation, click on the 'Submit' button at the bottom of the screen. A list of the selected outputs will be displayed in the section 'Best research outputs in last 8 years'.

Please note that this process must be completed on a page by page basis as only information on one page will be saved at a time.

Output type	
Year	
Author(s)	
Description	
Motivation	
Web address where output can be accessed	
Indicate own contribution if output is multi-authored	

## 12 STUDENT SUPERVISION

Your rating application does not require your student supervision record; however, you are given the opportunity to include the best research outputs of students supervised in the last 8 years (see section 12.1) as a measure of your research supervision ability. To be able to select the appropriate students you need to capture information on these students in the section 'Student Supervision Record'. Once you have added the students in the student supervision section, click on the link 'Best research outputs of students supervised in last 8 years'.

### 12.1 Best research outputs of students supervised in last 8 years

The **emphasis** should fall on students who obtained their doctoral degrees under your formal supervision or formal co-supervision. Do not include details of your coursework or diploma students. **Only those students who have contributed to your core research area** during the period under review (i.e. **1 January 2001 – 31 December 2008**) should be included in the submission.

Click on the 'Add' button at the bottom of the screen. This will provide you with a list of students supervised during the period under review.

From this list

- Identify only **research** students (master's and doctoral only) who have contributed to your core research and who have produced, in your opinion, the best research outputs (peer-reviewed publications etc.).
- Provide full references** of the research contribution(s), i.e., notably peer-reviewed publication(s), patent(s), emanating from the students' research in the "Students outputs and achievements" block. If you have already provided these outputs amongst your own research outputs (in terms of co-authored outputs) please **do not repeat them here but provide suitable cross-references**. **Note:** Information will not be saved if both the tick (✓) and the 'Outputs and Achievements' are not added.

Surname	
Initials	
Title	
Gender	
Race	
Citizenship	
National Identity number	
Institution	
Level*	
Degree (e.g. MSc, PhD etc.)*	
Part-time/full-time	
Year of first registration	
Completed	
Year degree was awarded	
Year supervised from	
Year supervised to	
Supervisor/Co-supervisor	
Student number	
Best research contributions from student supervision in the last 8 years	

\*Please ensure that the level and the degree are the same, e.g. Masters (level) and MSc (degree).

### 13. BEST RESEARCH OUTPUTS PRIOR TO LAST 8 YEARS

If you have research outputs preceding 2001, your rating application will be enhanced if you provide reviewers with some indication about the best work which you have done in this period. You are given the opportunity to provide up to ten research outputs which you consider your best before 2001. To do this you will have to capture these outputs in the relevant section(s) (items 10.1 – 10.5.4) in order for them to appear in the section 'Best research outputs prior to last 8 years'.

Once you have added the research outputs in the respective sections, click on the link 'Best research outputs prior to last 8 years'. Click on the 'Add' button at the bottom of the screen.

- Identify not more than ten of your best research outputs prior to the last 8 years, by ticking the 'Add' box on the right hand side of the output.
- No motivation is required in this case.

Output type	
Year	
Author(s)	
Description	

### 14. OTHER RESEARCH-BASED CONTRIBUTIONS

The following information should be supplied:

- A concise statement on your research-based contributions to **research capacity development** must be included in this section. These contributions could include:
  - assistance in the establishment and development of a research culture at historically disadvantaged tertiary education institutions
  - research-based contributions which you have made to the training and/or supervision of students from previously disadvantaged groups
  - collaborative linkages between institutions with an emerging research culture and other research institutions in the public and private sector
- A brief commentary on **other research-based contributions** that you consider to have **enhanced your research status** in your field over the past 8 years must also be provided. These contributions could include:
  - staff development
  - research-based improvements of the quality of education in primary, secondary and higher education
  - co-operative research initiatives with industry and/or societal organisations or other scholastic, research-based contributions
- This section should not exceed 5 500 characters including spaces (equivalent to one A4 page, Arial font size 10). **Note:** Carriage returns are counted as two characters.
- 

### 15. BRIEF DESCRIPTION OF COMPLETED RESEARCH

A succinct **narrative** of accomplished research **emphasising only achievements over the last 8 years**, and with reference to the relevant research outputs listed for the last 8 years, must be provided. If the relevant outputs may not have been read by, or be accessible to reviewers, it is essential that you include a brief but concise description of the work done, a summary of the results achieved and an explanation of the significance of the work.

Your statement on your completed research should not exceed 11 000 characters including spaces (equivalent to two A4 pages, Arial font size 10). **Note:** Carriage returns are counted as two characters.

## 16. SELF-ASSESSMENT OF RESEARCH OUTPUTS

An assessment of your own contributions to your research field over the last 8 years must be provided. The self-assessment should also be in the form of a **narrative**, where special emphasis should be placed on those contributions listed amongst the best research outputs. Please provide an account of how these best research outputs reflect the development and growth of your research during the recent years. Mention should be made of instances where you have, in your view, made noteworthy contributions to the extension of knowledge in your field, as well as how your work relates to others in your field. Your self-assessment should only relate to research done during the last 8 years.

- **Where more than one person has contributed to the research outputs you have listed you must indicate your own contribution to the team effort in this section.**
- Repetition/duplication of outputs (e.g. as a conference proceeding and a journal article) is strongly discouraged.

Your self-assessment statement should not exceed 5 500 characters including spaces (equivalent to one A4 page, Arial font size 10). **Note:** Carriage returns are counted as two characters.



## 17. ONGOING AND PLANNED FUTURE RESEARCH

Provide a brief but comprehensive statement in the form of a **narrative** on your ongoing and planned future research. This must include your research vision for the next five years as well as a concise discussion of your envisaged research activities during this period.

- **Any outputs that have not yet been published/produced, (i.e. those 'in press' or 'accepted' or 'submitted') must NOT BE included as research outputs in the period under review but should be included in this section.**

Your statement should not exceed 5 500 characters including spaces (equivalent to one A4 page, Arial font size 10). **Note:** Carriage returns are counted as two characters.

## 18. ASSESSMENT PANEL TO CONSIDER APPLICATION

**At least one assessment panel** (and a maximum of three assessment panels) **must be selected from the dropdown list of assessment panels**. Indicate the name of the assessment panel of your choice by clicking on the 'Add' button. Select an option in the Panel dropdown list and click on 'Submit'. If more than one assessment panel is appropriate, as in the case of multidisciplinary studies, indicate this by repeating this process. Please indicate the most appropriate choice amongst the assessment panels listed by using the 'Update Order' function. Use the  and  to move your selection higher or lower in the order. However, it must be noted that applications will be referred to **one** panel only. Specialist Committee members (the members of each panel consist of a Chairperson, Assessor and a Specialist Committee of 3 – 6 experts in the field) can, at their discretion, consult with specialist committee members from other assessment panels as and when required, especially about the selection of appropriate reviewers. **It must be stressed that the role of these panels in the evaluation process is to select peer reviewers and to make recommendations to the NRF on applicants' ratings based on the reviewers' reports and the applicants' submission. Members of these panels must not be confused with the peer reviewers of applicants.**

The current assessment panels which have been constituted to handle applications for evaluation and rating are the following:

√	Panel	Order	√	Panel	Order
	Animal and Veterinary Sciences			Anthropology, Development Studies, Geography, Sociology and Social Work	
	Biochemistry			Chemistry	
	Communication, Media Studies, Library and Information Sciences			Earth Sciences	
	Economics, Management, Administration and Accounting			Education	
	Engineering			Health Sciences	
	Historical Studies			Information Technology	
	Law			Literary Studies, Languages and Linguistics	
	Mathematical Sciences			Microbiology and Plant Pathology	
	Performing and Creative Arts, and Design			Physics	
	Plant Sciences			Political Sciences, Policy Studies and Philosophy	
	Psychology			Religious Studies and Theology	

Should none of the listed panels be appropriate, please indicate a suitable assessment panel by clicking on the 'Suggest' button at the bottom of the screen 'Assessment panel to consider application' and type in the appropriate panel name in the textbox. (However, remember that at least one panel must be selected from the dropdown list of assessment panels.)

'Other' panel

## 19. FEEDBACK

Please indicate if you would you like to receive feedback or not.

Should you require feedback

- Specialist Committees will provide feedback from the evaluation process, i.e. they will formulate feedback which could assist applicants in planning their future research. Specialist Committees may also identify feedback from reports of reviewers that could potentially be helpful to applicants in their future careers.
- Reviewers will remain anonymous.

While the NRF will engage in discussion about all aspects of the evaluation process it cannot enter into any discussion on the contents of feedback supplied.

Question	Response
Do you require feedback?	(y/n)

## 20. POSSIBLE REVIEWERS

Provide names and full contact details of **at least six**, but not more than ten, possible reviewers **in order of priority** who are best able to assess your recent research activities and contributions. As this is an international peer-review, where possible, please nominate reviewers from both South Africa and abroad. Reviewers need not be restricted to researchers in the higher education sector. In each case please provide a **motivation** for selecting a particular reviewer (e.g. reviewer is a world authority in the field of...., etc). This will provide Specialist Committees with additional information in the selection of reviewers. The association that you have with the reviewer should be clearly articulated (e.g. PhD supervisor, co-worker etc). Please ensure that the information as requested is supplied in full, and that it is accurate and current. It is especially important that email addresses are correct.

Name of reviewer	
Email address	
Institution/Organisation where based	
Association with reviewer	
Reason for nomination	
Reviewer specialisation(s)	

## 21. EXCLUDED REVIEWERS

Applicants are also given the opportunity to identify those reviewers (not exceeding three) who the NRF should not approach as reviewers for the application. A motivation will be required in each instance. Although the NRF would normally not approach such reviewers, it does reserve the right to do so if it is regarded as necessary.

Name of reviewer	
Institution	
Reason for exclusion	

## 22. L RATING APPLICATIONS

The L category caters for persons normally younger than 55 years who were previously established as researchers or who previously demonstrated potential through their own research products, and who are considered capable of fully establishing or re-establishing themselves as researchers within a five-year period after evaluation. Applicants must demonstrate that they could not realise that potential or sustain their research ability by virtue of a lack of a research environment, or time spent in industry, or on maternity leave, or raising a family.

This category was introduced to draw an increased number of researchers with potential from disadvantaged backgrounds as well as women into research. It also caters for persons at previously disadvantaged institutions or persons who were previously established as researchers and who have recently returned to a research environment after periods in industry. It is only applicable to South African citizens or other foreign nationals who have been resident in South Africa for at least five years during which time they were unable for practical reasons to realise their full potential as researchers.

For applicants to qualify for this category the **employing institution** must have demonstrated its **commitment** towards a growth strategy for the staff member concerned. It is imperative that the designated authority and the applicant reach consensus about a recommendation for placement in category L before applications are submitted to the NRF.

Should you wish to apply for an L rating click on the 'yes' button next to the question 'Are you applying for an L rating'. This will refresh the screen.

Question	Response
Are you applying for an L rating?	(y/n)

Please scroll down and complete the following three sub-sections:  
The total text for all three sections should not exceed **16 500 characters including spaces** (equivalent to three typed A4 pages, Arial font size 10). **Note:** Carriage returns are counted as two characters.

- 1) Provide reasons why you wish to be placed in category L.
  - In this section indicate why you could not realise your potential/establish yourself as a researcher in the past/re-establish yourself in the recent past.
  -

- 2) Provide a realistic growth plan expressed:
  - quantitatively in terms of envisaged research outputs over the next five years, and
  - qualitatively in terms of your research vision (being specific about the actual research you wish to do), present and future plans to enter (or re-enter) the research arena, milestones you wish to achieve annually, proposed focus of research, potential future collaborations etc.

- 3) Indicate how you intend to achieve the proposed research outputs within the following three to five years. Please ensure that you provide realistic information.

### 23. CHECKLIST

- Please complete the checklist to ensure that you have included all the necessary information required before clicking on the 'Final Submit' button at the bottom of the 'Application Progress' screen.
- We strongly advise applicants to scrutinise and check their application thoroughly before submitting it for approval by the employing institution in order to ensure that no inaccurate and/or incomplete information is contained in the application. **Any misrepresentation (innocent or otherwise) contained in your application will be viewed in a serious light.**

#### CHECKLIST: APPLICATION FOR EVALUATION AND RATING: 2009

Please use this check-list to ensure that you have included all the necessary information required before clicking on the 'Final Submit' button at the bottom of the 'Application Progress' screen. Once this is done, you will not be able to edit the application (i.e., it will become a 'READ ONLY' document) and the 'Edit' button next to the application ('My Applications' screen) will become a 'View' button. This will notify the Designated Authority at your institution that your application has been submitted to them for further processing. Should any changes need to be made after the 'Final Submit' button has been clicked, either the Designated Authority or the NRF will have to 'unlock' your application.

A .pdf version of your application will be generated once your application has been electronically submitted to the designated authority.

It is advisable that the document 'Guidelines and instructions for completing the application for evaluation and rating' is printed and kept close at hand for easy reference while working on the online application as it contains detailed guidelines and instructions for completing the online application for evaluation and rating. This document may be accessed at <http://www.nrf.ac.za/evaluation/content/evaluation/apply.htm> and **MUST** be consulted before completing the application.

## CHECKLIST

Have you

- Indicated your highest qualification?
- Indicated the year it was obtained?
- Included the title of thesis (if the PhD was awarded in the last five years)?
- Included your **entire** qualifications history?
- Listed **all** the positions you have held in the past, including your current position?
- Selected **one scientific domain**, at least **one** (but not more than three) **primary research level(s)**, at least **one** (but not more than four) **secondary research level(s)** and at least **one** (but not more than ten) **fields of specialisation** from the list provided?

Yes      No



Have you

- Provided a brief biographical sketch, including any information **not** already provided elsewhere?
- Listed your articles in journals by giving all the authors' names in the correct sequence (i.e. in the sequence in which they appear in the published article), the full title and reference and the inclusive pagination, e.g. *Wiehart UIM, Nicolson SW, Eigenheer RA and Schooley DA. Antagonistic control of fluid secretion by the Malpighian tubules of Tenebrio molitor: effects of diuretic and antidiuretic peptides and their second messengers. J. exp. Biol. 2002, 205: 493-501*
- Listed all your outputs in accordance with the instructions given under item 10 – 10.5.5 of the guidelines?
- Remembered to include the volume, number, start-end page for all your research outputs and, **in particular, peer-reviewed conference proceedings**?
- Indicated not more than five outputs that you consider to be your best during the assessment period?
- Provided a **motivation** for selecting these outputs as being your best?
- Provided a web address where outputs can be easily accessed by your reviewers?
- **Clearly** indicated your **own** contributions to multi-authored outputs?

Yes      No



Have you

- Identified research students who have contributed to your core research and who have produced, in your opinion, the best research outputs (peer-reviewed publications etc)? (See guidelines item 12 – 12.1)
- Included a brief (not more than two pages) description of completed research?
- Included a self-assessment (one page) of research outputs?
- Provided a statement (one page) on your ongoing and planned future research?

Yes      No



Have you

- Selected at least one assessment panel to consider your application?
- Provided reasons why a particular reviewer has been nominated?
- Indicated your association with the reviewers you have nominated?
- Included the specialisation field(s) (if known) of the reviewers you have nominated?
- Listed any reviewers whom the NRF should not approach?
- Indicated whether you require feedback?
- Indicated whether (or not) this is an application for the L category?
- Checked that the print preview version of the online application does not exceed 27 pages?

Yes      No

## 24. DECLARATION

Please complete the following declaration by placing a tick (✓) in each box. Your application cannot be submitted unless these boxes are ticked.

I certify that the information contained in my application for evaluation is correct and that all the relevant information as required in the guidelines has been provided.

I am aware that should I be successful in obtaining an NRF rating the result will be published on the NRF website. (✓)

We strongly advise applicants to scrutinise and check their application thoroughly before submitting it for approval by the employing institution in order to ensure that no inaccurate and/or incomplete information is contained in the application. **Any misrepresentation (innocent or otherwise) contained in your application will be viewed in a serious light.**

## Appendix 5 Instructions to Reviewers and Reviewer Response Template

[<http://evaluation.nrf.ac.za/Content/Evaluation/reviewers.htm>, accessed February 2008]

### Guidelines and instructions to reviewers on the completion of a rating evaluation

When completing your review, kindly devote the better part of your evaluation to the issues addressed in the second item "Appraisal of past research outputs" and the third item "Estimation of research standing". Your report should ideally be between 400 and 800 words in length (i.e. between one and one and a half A4 pages).

#### 1. Knowledge of applicant

Please indicate whether:

- you know the applicant personally;
- you have previously encountered the applicant's work, for example by having heard aspects of the work presented at a conference;
- you have read any of the applicant's work before being asked to undertake this appraisal, or subsequently;
- you have cited any of the applicant's work.

#### 2. Appraisal of past research outputs

- Please focus your critique specifically on the **quality of the research outputs over the past seven years**. Discuss the impact, if any, you feel that the applicant's work has had on its specific research field, and whether it has impacted on other fields.
- Evaluative judgements which are related to specific aspects of the applicant's work are of particular value to us.
- It is not necessary to provide a quantitative summary of outputs (for example, a count of publications in refereed journals, published conference proceedings, etc.) nor a detailed exposition of the content of the research.
- Your opinion on the standing and appropriateness of the journals, books, conference proceedings and other forms of research outputs which the applicant may have listed would be very useful.
- If the research outputs are those of a group, kindly assess the applicant's contribution to the group's work if you are able to.
- If you are able to, please describe any impact the research outputs may have had on industry or society.

If the applicant has provided a motivation for the L category, please focus your critical comments on the quality of all the research outputs.

#### 3. Estimation of research standing

Estimation of the applicant's current standing as a researcher: **Please indicate how you would rate the applicant relative to peers in the field**. If possible, comment on both national (usually South African, though some of our applicants may have conducted their recent research in another country) and international standing. **We are evaluating the applicant's current standing, so please base your judgement primarily on the research outputs of the last eight years**.

Assessment Panels would appreciate comments on the size of the applicant's research field (for example, by the number of researchers working in it), and on the current importance of the field of the applicant's research within the discipline.

(If the applicant has provided a motivation for the L category, please indicate whether, given appropriate support, the applicant is likely to become an established researcher (or to become one again) and, if so, the likelihood of achieving this in the next five years.)

#### **4. Feedback to applicant**

Most applicants indicate that they would appreciate receiving feedback from the evaluation process. We may therefore wish to provide edited abstracts from your report. The feedback will always be anonymous, as it is the NRF's policy to keep the source of appraisals confidential. However, we will respect your position if you do not wish any feedback to be given.

## Appendix 6 Definitions of the NRF Rating Categories and Sub-Categories

[<http://evaluation.nrf.ac.za/Content/Evaluation/Apply.htm>, accessed February 2008]

Category	Definition	Sub-category	Description
<b>A</b>	Researchers who are unequivocally recognised by their peers as leading international scholars in their field for the high quality and impact of their recent research outputs.	A1	A researcher in this group is recognised by all reviewers as a leading scholar in his/her field internationally for the high quality and wide impact (i.e. beyond a narrow field of specialisation) of his/her recent research outputs.
		A2	A researcher in this group is recognised by the over-riding majority of reviewers as a leading scholar in his/her field internationally for the high quality and impact (either wide or confined) of his/her recent research outputs.
<b>B</b>	Researchers who enjoy considerable international recognition by their peers for the high quality and impact of their recent research outputs.	B1	All reviewers concur that the applicant enjoys considerable international recognition for the high quality and impact of his/her recent research outputs, with some of them indicating that he/she is a leading international scholar in the field.
		B2	All or the overriding majority of reviewers are firmly convinced that the applicant enjoys considerable international recognition for the high quality and impact of his/her recent research outputs.
		B3	Most of the reviewers are convinced that the applicant enjoys considerable international recognition for the high quality and impact of his/her recent research outputs.
<b>C</b>	Established researchers with a sustained recent record of productivity in the field who are recognised by their peers as having: <ul style="list-style-type: none"> <li>produced a body of quality work, the core of which has coherence and attests to ongoing engagement with the field</li> <li>demonstrated the ability to conceptualise problems and apply research methods to investigating them.</li> </ul>	C1	While all reviewers concur that the applicant is an established researcher (as described), some of them indicate that he/she already enjoys considerable international recognition for his/her high quality recent research outputs.
		C2	All or the overriding majority of reviewers are firmly convinced that the applicant is an established researcher (as described).
		C3	Most of the reviewers concur that the applicant is an established researcher (as described).
<b>P</b>	Young researchers (normally younger than 35 years of age), who have held the doctorate or equivalent qualification for less than five years at the time of application and who, on the basis of exceptional potential demonstrated in their published doctoral work and/or their research outputs in their early post-doctoral careers are considered likely to become future leaders in their field.		Researchers in this group are recognised by all or the over-riding majority of reviewers as having demonstrated the potential of becoming future leaders in their field, on the basis of exceptional research performance and output from their doctoral and/or early post-doctoral research careers.

Category	Definition	Sub-category	Description
Y	Young researchers (normally younger than 35 years of age), who have held the doctorate or equivalent qualification for less than five years at the time of application, and who are recognised as having the potential to establish themselves as researchers within a five-year period after evaluation, based on their performance and productivity as researchers during their doctoral studies and/or early post-doctoral careers.	Y1	A researcher in this group is recognised by all reviewers as having the potential (demonstrated by research products) to establish him/herself as a researcher with some of them indicating that he/she has the potential to become a future leader in his/her field. (Applicants on the borderline between P and Y should be rated at this level.)
		Y2	A researcher in this group is recognised by all or the over-riding majority of reviewers as having the potential to establish him/herself as a researcher (demonstrated by recent research products).
L	<p>Persons (normally younger than 55 years) who were previously established as researchers or who previously demonstrated potential through their own research products, and who are considered capable of fully establishing or re-establishing themselves as researchers within a five-year period after evaluation. Candidates should be South African citizens or foreign nationals who have been resident in South Africa for five years during which time they have been unable for practical reasons to realise their potential as researchers.</p> <p>Candidates who are eligible in this category include:</p> <ul style="list-style-type: none"> <li>• black researchers</li> <li>• female researchers</li> <li>• those employed in a higher education institution that lacked a research environment</li> <li>• those who were previously established as researchers and have returned to a research environment.</li> </ul>		<p>This category was introduced to draw an increased number of researchers with potential from disadvantaged backgrounds as well as women into research. It also caters for persons previously established as researchers who have returned to a research environment after periods in industry or elsewhere. Applicants must demonstrate that they could not realise the potential or sustain their research ability by virtue of a lack of a research environment, or time spent in industry, or on maternity leave, or raising a family. For candidates to qualify for this category the employing institution must have demonstrated its financial commitment towards a development strategy for the staff member concerned.</p>

## Appendix 7 Gradings Assigned by the NRF Assessment Panel to the Peer Reviewer Reports

[[http://evaluation.nrf.ac.za/Content/Evaluation/PanelMembers\\_2006.htm](http://evaluation.nrf.ac.za/Content/Evaluation/PanelMembers_2006.htm), accessed February 2008]

Reports by reviewers are assessed by Specialist Committees and rated as follows:

- 1 Good to excellent report.** Reviewer gives a critical analysis of the recent research outputs and comments critically on the quality of the research outputs of the last eight years as well as the international/national standing of the applicant. Reviewer has read the most important outputs of the last eight years.

Note: A 'good to excellent' rating should only be awarded to reviewers who make it clear that they have actually read or have a sound knowledge of the applicant's research outputs. Hence care should be taken not to overrate reports which state, for example,

- It appears that the applicant's work is...
- I believe...
- I have heard from one of my colleagues...
- I am told...
- It seems that his/her recent research outputs are...
- I have not read any of the publications...
- My research is not in the field of Prof X but I will nevertheless try to address your questions...

- 2 Satisfactory report.** Reviewer gives an analysis of recent research outputs. Reviewer is familiar or has familiarised him/herself with some of the outputs of the last eight years e.g. by having acquainted him/herself with at least two or three recent research outputs.

- 3 Unsatisfactory report.** Report by reviewer is superficial, or contains sweeping and/or uncorroborated statements, or over-generalises, or provides irrelevant information, or fails to focus on last eight years.

Note: Unsatisfactory reports should not be taken into account when deciding on a rating.

- 4 Inconclusive report.** Report which makes it difficult to decide whether the reviewer should be approached again in future. The reviewer has replied but cannot oblige with the present request for various reasons e.g. ill, going abroad, going on sabbatical for a lengthy period, time constraints, etc.

- 5 Inappropriate report.** Report is inappropriate for a particular applicant, e.g. the reviewer is not active in the applicant's field of research. Such a reviewer should not be approached again for the applicant in question.

- 6 Inappropriate reviewer.** Reviewer should not be approached again for **any** applicant. Reviewers in this group include:
  - a reviewer whose report is not credible or is biased (whether positively or negatively);
  - a reviewer who is no longer active in the research field and has lost touch with it, e.g. as a result of retirement.