James Hartley, *University of Keele*
Christopher K. Knapper, *University of Waterloo, Canada*

Academics and their Writing

ABSTRACT

This paper presents the results from a questionnaire on academic writing which was sent to a representative sample of 75 academics at the University of Keele, England, and 100 academics at the University of Waterloo, Canada. The response rate from each institution was low (41 and 34% respectively) but higher than that reported in earlier research. An analysis of the results obtained, comparing arts, social science and science faculties is presented, together with a discussion of the findings, their instructional implications and their limitations.

For one reason or another there has been a revival of interest in writing. Not only has there been an increase in the number of books recently published that are concerned with teaching effective writing skills (e.g. Dunshee & Ford, 1980; Jones, 1980; Zinsser, 1980; Fulwiler & Young, 1982; Griffin, 1982; Phelps-Gunn & Phelps-Terasaki, 1982; Spencer, 1983) but also, since 1980, there have been more than 10 books concerned with general issues or actual research on the topic (e.g. Gregg & Steinberg, 1980; Hartley, 1980; Frederiksen & Dominic, 1981; Humes, 1981; Kress, 1982; Nystrand, 1982; Smith, 1982; Anderson, Brockman & Miller 1983; Kroll & Wells, 1983; Martlew, 1983; Mosenthal, Tamir & Walmsley 1983). None of these books, however, has focused entirely on the skilled writing of adults.

Writing has been examined in a number of ways: researchers have considered the *process* and the *product*. The products of writing can be subjected to different kinds of analyses—linguistic, stylistic, citation, changes over time, and so on. It seems that it is easier to analyse the product than it is to analyse the processes involved in writing. To analyse the process investigators have used questionnaires, examined introspective reports, notebooks, correspondence and diaries, recorded interviews with writers or, indeed, acted as participant observers. Much of this research has been cogently summarised by Emig (1971), Bazerman (1983) and Humes (1983). New developments (e.g. videorecording, word-processors and protocol-analysis) allow one to record writing processes and to question writers about them as they watch re-runs of themselves at work (e.g. Schumacher *et al,* 1984). But such techniques, to our knowledge, have not yet been used with academic writers.

Lowenthal & Wason (1977) gave a questionnaire to academic staff at University College, London. After a brief introduction the following questions were asked:

1. How much do you enjoy the actual process of writing?
2. How many drafts do you normally write before you submit a paper for publication?
3. Do you enjoy re-writing what you have written?
4. Would you be willing to meet us for a brief session to explore further the problems of academic writing?
5. (optional) Write a brief paragraph on the back of this paper about the importance or unimportance of this topic.

Name (optional)

Department (optional)

The response rate to this questionnaire was low. One hundred and seventy replies were received (that is 17% of the total). And some of these replies were uninformative. One respondent for example, replied to the questions as follows: (1) Not much (2) Three or four (3) No (4) No. Other respondents, however, replied in great detail. Lowenthal & Wason (1977) make extensive use of quotations from their respondents to indicate the variety of attitudes held by academics towards writing.

In this paper we describe the results of our attempts to replicate and extend Lowenthal & Wason's work. A covering letter and a more detailed questionnaire was drawn up (see Appendix). It was sent first to a representative sample of 75 colleagues at the University of Keele—25 in the Arts faculty, 25 in the Social Sciences faculty, and 25 in the Science faculty—professors, heads of departments, and psychologists being excluded. The same questionnaire (slightly modified) was then sent (without such exclusions) to a similarly representative sample of 100 colleagues in the faculties of Arts and Science at the University of Waterloo, Canada. The aim here, of course, was to see if there were differences in the procedures used by academics in different subject areas, and to compare the responses of British and Canadian academics.

Twenty-one responses were received initially to the questionnaire distributed at Keele. This number increased to 31 after a subsequent follow-up letter (i.e. a return rate of 41%). Thirty-four responses were received (after a similar reminder letter) to the questionnaire distributed at Waterloo (i.e. a 34% response rate).

The numbers of responses from the three Keele faculties were fairly evenly divided: 12 from Arts, eight from Social Sciences and 11 from Science. One reply was anonymous. Similarly, the numbers of responses from the Arts and Sciences at Waterloo were evenly divided (17 from Arts and 17 from Science). The 17 Science responses were divided by the authors into Natural (eight) and Social Sciences (nine) although Social Sciences at Waterloo are taught in the faculty of Arts. None of the Canadian respondents was anonymous, but one (a sociologist) declined to reply (regarding the questionnaire as an inappropriate method of inquiry).

Only five respondents from the Keele sample chose to write their responses on the questionnaire itself, the remainder preferring to write longer answers, and (as directed) to use the questions in the questionnaire as prompts to their thinking. Seventeen of the Waterloo sample wrote their responses on the questionnaire. Because of this difference of approach between the respondents (both at Keele and Waterloo) it is not always possible to give a precise account of the numbers responding in various ways to each question. Nonetheless a preliminary analysis of the results indicated that as there were no significant disparities between the results from the British and the Canadian respondents,

it would be appropriate to pool their responses. The next section of this paper, therefore, presents a summary of the replies from these 65 respondents.

Results

Section A. Procedures in Academic Writing

(1) *What makes you decide that you want to write an article/book?*

The responses given here were many and varied. Writing in order to get something published seemed to emerge as one motivation, especially amongst scientists and social scientists, whereas arts writers were more keen to emphasise the intrinsic rewards of writing—such as the opportunity to sort out an argument or to develop one's thinking. It would be restrictive, however, to limit the description of the responses in this way. Several arts writers reported writing for publication, and likewise, several scientists reported that writing helped them to sort out their ideas. Some typical quotations from responses to this question are as follows:

> When a nice piece of experimental work is finished I want to get it into print so that others can see what we have done. (Science)

> An attempt to work out for myself a complex intellectual problem. (Social Science)

> Various things like, for example, (i) a request to participate in a conference, (ii) an idea which I have which I want to work out, (iii) the need to write a paper for a staff seminar, and (iv) the need to write another chapter for my book. (Arts)

(2) *How do you think about the structure of what you are writing?*

The responses from respondents in the different faculties did seem to vary more here according to faculty. Many scientists and social scientists structured their writing in terms of different components or functions ('results', 'introduction', 'discussion', etc.) whereas respondents in the arts tended to build their structures around a main argument or theme. But again many of the statements made by scientists could easily have been made by those in arts faculties, and vice versa. One respondent (a scientist) made a clear distinction between writing for three different kinds of text—scientific articles, books or solicited reviews, and popular articles, thus emphasising that the purpose, or goal, of the writing task interacts with the structures chosen.

> Once experiencing the need to write I spend a great deal of time reading related material, talking with colleagues, friends, or whosoever, and thinking about the content. I spend a great deal of time in which I ponder (that is the most descriptive term I can think of at the moment) the material. I do the 'pondering' best while taking very long walks usually at night. It is during those sessions that things start to take shape for me. (Arts)

> I decide to write on a topic that occurs to me from observation (in the case of field work) or reading (in the case of literary interpretation) . . . Because I am an art historian, collecting useable photographs for illustration is the first necessity, and the words cannot be written until the illustrations have been assembled. (Arts)

> I spend a long time thinking, then I try to create a skeleton which I gradually refine. In the long run this becomes the structure, and it is usually worked out

in terms of a numerical structure. E.g. principal subject 1, then sub references 1.1 and 1.2, then sub-sub references 1.1.1 and 1.2.1. Seldom beyond this point. (Social Science)

For articles there is a set form: introduction, materials and methods, results, discussion, references, figures, tables. (Science)

(3) *Do you normally write a complete article/chapter etc. at one sitting, or do you work on one section at a time?*

The majority of respondents in all three faculties worked one section at a time. Some respondents, of course, adopted different strategies.

The last thing I wrote was from start to finish: earlier efforts have been more like shuffling a pack. (Arts)

I write one section at a time. It gives a sense of achievement and completeness —and it saves the bore of going over the same stuff *n* times. (Arts)

I normally do it one section at a time, but it depends on the length of the article. (Science)

(4)   *Do you write from beginning to end, or do you write some sections out of sequence?*

The responses to this question often depended on the length of the article being written, but *half* of the respondents in each faculty replied from beginning to end (for the first draft). The other half reported a variety of strategies with, once again, the arts writers more likely to concentrate on following an argument, whereas scientists worked 'outwards' from the results.

I like to complete the whole article/section at one time but this is often not possible. Normally I write from start to finish, but where a project is divisible into wholly discrete sections it does not matter if some get done before others which belong earlier in the sequence. This might be necessary if, say, material for one particular section were delayed. (Arts)

The Intro is always written last as it must provide an honest reason for the reading effort and a clear view of a promise which can be met. (Science)

Usually the first stage in writing is the production of the figures and tables, followed by the methods section. Then I, and I think most scientists, do the results section around the data, followed by the introductory review, and lastly the discussion, which is the most difficult part as it must be carefully thought out. (Science)

I work on one section at a time, usually the results first and then move into the interpretation followed by conclusions, introduction, references and abstract in that order. (Science)

I always write the materials and methods last (as they are routine and boring!). (Science)

(5)   *Do you produce several drafts? If so, how many? What functions do they serve? How do the drafts change?*

The number of drafts that people claimed to write varied: the extremes ranged from 'one only' to 'countless', the median reply being 'three or four'.

One draft, rarely more. I have a detailed plan on paper or in my head and notes and/or diagrams. I would not normally do anything more drastic than shift a paragraph for better emphasis or clearer argument. (Arts)

Every page has to be worked and re-worked in the interests of style, clarity and accuracy. (Social Science)

After the first draft (longhand) I am keen to see what it looks like in print. I often feel that it 'reads differently' in print from longhand. I do sometimes re-write the first draft again by hand before putting it on the word-processor. (Science)

(6) *Do you write in longhand, use a typewriter, or a word-processor—or combinations of these tools?*

This question produced a variety of responses but, in a sense, a uniformity which we did not expect. We had anticipated that there would be differences between the Keele and the Waterloo samples in view of the differences between the institutions in terms of the availability of word-processing facilities (Keele's facilities in this respect being somewhat less abundant than Waterloo's). In the event, however, few respondents in both institutions (only nine out of the 63 respondents) reported using word-processors. Word-processing was more common for scientists (4) and social scientists (4) than it was for those in arts (1). However, even here, the scientists were not using word-processors for composition (first drafts) but more for revision and editing, and this task was often assigned to a secretary. Although these are early days yet in the computer revolution, it may be that these results indicate that the availability of modern aids does not in itself change ingrained writing habits learned at school. Indeed, some of the replies produced by the artists seemed to show an anti-mechanistic bias:

I write in longhand. I hate typewriters. (Arts)

Usually longhand, with lots of space for correcting, but sometimes on the typewriter in the same way. (Social Science)

I write the first draft in pencil, so errors can be corrected and modifications easily made. The next stage is to attempt to tidy up . . . quite often the text is re-written in longhand as a complete article in an attempt to integrate all portions of the paper and to keep the paper fresh. After this the paper is usually typed. I like then to put the manuscript in a drawer for a couple of weeks . . . then on returning to it I can read it with greater objectivity . . . and squeeze it to the length required. The final version is then prepared either directly or on the word-processor. (Science)

(7) *Do you ever dictate your articles? If so, what are the advantages and limitations of this method?*

Only two or three of the respondents reported using dictation in the early stages of writing. Many offered reasons for not using dictation, the most common of which seemed to be the belief that the results would not be sufficiently cogent or polished.

I have never used a dictaphone or word-processor. I can't say I fancy the idea. (Arts)

I have dictated the text of translations of articles. The advantage of this is that it tests the sound and the rhythm of the sentence, paragraph, etc. better than

reading out loud does. The disadvantage is having to dictate all the punctuation. (Arts)

I avoid dictation because I find the machinery distracting having to switch off for lots of pauses for thought. I mean to try again, though. (Science)

(8)   *Do you ever collaborate with others in writing papers or books? If so, how often? How do you arrange the various tasks between you?*

This question was added into the questionnaire and given only to the Canadian respondents. It was included because there is evidence of an increase in collaborative authoring, especially in the sciences (Over, 1982). Our results confirm this picture. Seventeen of the 30 respondents replied that they collaborated or had collaborated in writing, and there was evidence of more collaboration amongst the scientists (10 out of 14) than among the arts respondents (seven out of 16). The different methods of collaboration described by Fox & Faver (1982) were reflected in the following replies:

I have collaborated with two other people in writing. It has succeeded much better than I thought it would, since I tend to be a loner in my work. We divided the reading of sources between us, then discussed our findings together. I found that each produced ideas that we would have independently anyway, but we also came up with ideas as a result of our discussing together which neither of us would have produced on our own. We then devised the organisation together and then I have written the draft, which both of us have then worked over. (Arts)

In one case I had a co-author on a book. We decided beforehand who would do what chapters. Afterwards we went over the whole work together, making some changes as we went along. (Arts)

Yes. Sometimes! Divide up according to expertise. I quite often will do bulk of writing to get uniform style. (Science)

I get involved with a co-authored paper about once every two years: this usually arises from a student research project for which I have provided the idea. I always ask the student to do the first draft (complete) and then the two of us do the further editing and additions (Science)

Collaboration, of course, may lead to problems:

Yes. Less often now, formerly three-quarters of my writing. Usually I took up on their ideas and ended up doing all the work. Now I am more confident and so independent. (Arts)

My experience in collaboration over books has been bad. I have been let down by failure of the other fellow to deliver, and I find that editor's attempts to produce uniformity of style in multi-authored books leads to stylistic dullness. (Science)

(9)   *What role, if any, does a secretary play in the production of your articles?*

Responses to this question again varied to some extent between faculties. Some colleagues were fortunate to have personal secretaries, others shared departmental secretaries, and some managed without them. Most respondents received some assistance with the final draft (but not all) and this was sometimes with the aid of a word-processor. Many colleagues expressed extreme gratitude to their secretaries for their assistance.

(10) *Do you ask your colleagues to read and comment on what you have written?*

About half the respondents in each faculty answered positively to this question. The quotations below illustrate some of the issues raised:

> Certainly I do ask colleagues, usually a specialist from another department, to look over what I've written. Seminars are useful for trying out earlier versions. It's a practice I find extremely useful. (Arts)

> Some of the most pleasing pieces (for me) have been the result of discussion, or working within a small group. (I think this is unusual in literary criticism and wouldn't always work.) (Arts)

> I occasionally ask colleagues, but not normally. There are no experts at the university on the topics on which I write. I usually rely on liaising with the editor concerned. (Arts)

> I would only ask a colleague to read something if it was directly in his field. (Social Science)

> I have always felt a reluctance to ask colleagues to read my papers, probably through lack of confidence ... I comfort myself in the thought that other writers must suffer the same agonies in writing as I do. (Science)

> I usually only ask my students. (Science)

Section B. Attitudes to Writing

(11) *Do you enjoy writing?*

Lowenthal & Wason (1977) reported that many of their colleagues found writing 'immensely enjoyable', others found it 'excruciatingly distasteful', but most found it a mixture of the two. Few respondents to our questionnaire were quite so vehement in their replies, the majority simply responding with a qualified 'Yes' to this particular item. The following responses are typical:

> While I find writing something of a struggle, I do find it rewarding. (Arts)

> I enjoy writing: it is a form of creativity. (Arts)

> I distinguish between (i) writing as the expression of ideas, arguments, information, etc.; (ii) writing as the manipulation of language; (iii) writing as a physical activity. I enjoy (i) most and (iii) least. (Arts)

> I do not enjoy writing. I find it a hard struggle. I constantly have doubts about what I write, and I am not happy with the results. (Social Science)

> I enjoy the satisfaction of a finished paper ... the greatest satisfaction is in a job well done. (Science)

(12a) *What do you like most about writing?*

Most colleagues like the sense of achievement that writing gives them. As they put it, I like:

> Feeling it is going well. (Arts)

> Expressing what I want to say. (Arts)

> Pleasure in producing some order from the chaos. (Arts)

> The excitement when I seem to be breaking through. (Social Science)

(12b)   *What do you like least about writing?*

There were two main sources of difficulty mentioned here: one was concerned with the content (and getting started in particular), the other with the actual physical process of writing.

> Writing the first paragraph. (Arts)

> The chore of typing and revising. (Arts)

> The physical strain with my gammy shoulder. (Arts)

> I hate to re-write at the direction of an editor. I never agree with editors but I do exactly what they tell me to do, grinding my teeth the while! (Arts)

(13)   *Is writing a struggle, or does it come easily?*

For most respondents writing was a struggle—although there were exceptions.

> Sometimes I find writing easy, sometimes a struggle. If anything I find it less easy now than in the early stages of my career. (Arts)

> Writing is a struggle usually, but sometimes it flows once one has got into one's stride. (Arts)

> Writing used to be an enormous chore. However, like many things, the more you do the easier it gets. (Science)

> Writing comes easily when the physics is clear: on bad days a simple paragraph may be the result of two to three hours' toil: on other days, ten to fourteen pages of handwritten material may pour out of one sitting—although not always with good style or English. (Science)

(14)   *Do you write at particular times of the day?*

Few respondents seemed to have a preferred time of day for writing. Basically what seemed to be needed were periods of peace and quiet!

> I like to write in the morning, if possible, before going into work. (Social Science)

> My best writing time is in the morning before lunch. I need complete silence and no interruptions, though I will 'distract myself' with walking about or getting tea or something. (Arts)

> I write best in the late evening or early morning. (Arts)

> I need a big chunk of time in which to write. Fifteen uninterrupted hours for three or four days in a row. Time without any distractions is a must for me. I cannot write for just a couple of hours a day. Once I start the process I can continue to do so without taking much time for meals or toilet stops. The only thing that hurts is my back. I recently discovered the value of a typist's chair. Otherwise I do not experience any feeling of being tired even after very long sessions. (Arts)

> To write I need peace and quiet and no distractions. (Science)

These results seem more varied than those quoted by Pullinger (1983). Pullinger found that about 55% of his sample (of 36 scientists) wrote in the evening, about 30% wrote in the mornings, about 10% before going to work in the morning, and about 5% in the afternoons.

(15) *Do you use any particular aids to help you write (like a particular desk or place, background music, etc.)?*

Few respondents seemed to use particular 'environmental idiosyncrasies' such as Schillers' rotten apples, or Kipling's black ink (see Hartley, 1980) to help them work. Only three reported working with the aid of music.

> I seek places—e.g. my library carrel—where I am sure of being uninterrupted for two-hour spells. (Arts)

> I don't use particular aids, but I do get obsessed by stationery and pens. I keep changing from pencils to Pentels and to fountain pens and so on. (Science)

> I need lots of desk space so I can spread out papers, books, magazines, dictionaries, and other material. The room soon begins to have a chaotic appearance but in fact all is under control. God help anyone who touches one precious scrap of paper! I hate to be disturbed during the writing sessions even for food. Coffee is always welcome but the person who delivers it must put it down and then quickly disappear. (Arts)

(16) *Do you ever get writer's 'blocks'? If so, how do you overcome them?*

Almost every respondent confessed to experiencing writer's blocks. None had startling suggestions for removing blocks, just sensible advice (although one did suggest praying for inspiration!).

> If I get a block I (a) drop it and go and do something 'non-intellectual' for a while—e.g. polish the floors—or (b) do something 'intellectual' of an entirely different kind. (Arts)

> If I get a block I try to get by by moving on to another section. (Arts)

> I overcome minor blocks (e.g. with small sections, or even sentences) by 'turning them around' and they invariably solve themselves . . . If it's a more major block, then I go back to the beginning of the draft, correct it, even rough type it, by which time I'm 'in-the-swing' again and can continue. (Science)

> I always finish a piece of work at a point where it is useful—or necessary—to re-write/type etc. before carrying on. I start the next session with the re-write and this enables some continuity to exist. (Science)

(17) *Do you spend much time writing? Is writing important to you? Do you feel frustrated if you are prevented from writing?*

Respondents expressed mixed feelings on this topic. For some writing was important and compulsive, for others it took an equal place among other activities, and for some it was regarded as less important than other activities (such as teaching).

> It is only recently in my career that academic writing has become really important to me: most of my early energies went into getting the teaching right. (Arts)

> I don't spend much time writing. It is not particularly important to me. I can't say that I feel frustrated if I cannot write. (Arts)

> I spend a lot of time writing. It is very important to me as a means of self-expression and fulfilment. When I cannot write I do tend to feel frustrated. (Social Science)

> Writing is far less important to me than teaching and other related activities. (Science)

(18) *Have you done any writing for publication in addition to academic writing—e.g. newspaper articles, fiction, poetry, etc.? If so, could you comment on the differences from/similarities to your academic writing?*

This question was added into the original questionnaire (following a suggestion from one of the respondents). It was given, therefore, only to the Canadian sample. Seven of the arts respondents and six of the sciences (that is just under a half of this sample) reported writing in other genres. The overall view appeared to be that such activity was 'refreshing and rejuvenating'. Some responses are as follows:

> I have published both poetry and fiction. Creative writing is similar to academic writing in that in both genres I write because I have something to say, to communicate, that has import for those people who are interested in the subject. Creative writing is also a form of teaching. The difference is that in academic writing I communicate directly through discourse, while in creative writing I communicate indirectly through imagery, narrative, and characterisation. (Arts)

> No—except long letters to friends, and *sermons*! The academics are more vicious in response, so I write less for them. But I write from my heart and head in both cases: fearful of being presumptuous with my friends in letters. (Arts)

> Yes, I once submitted a story to the *New Yorker,* but it was politely rejected. If they used something like the referee process (or at least told me what *they* thought was wrong with it), then I would have known how to improve it. (Science)

> I have written a few popular articles and I feel I should probably have done more because the public is so ignorant and so deceived by self-styled experts. I find such articles easy. They require little planning but I always polish them very carefully to ensure their readability and comprehensibility. (Science)

Section C. General Descriptions

(19) *Which of the descriptions given in the questionnaire (see questionnaire appendix) produced by other academics most nearly fits you (if any)? Please add any explanatory comments you feel necessary.*

In order to add some liveliness to our questionnaire (and to indicate to the respondents the kinds of things we were interested in) we included as an appendix three passages written by academics which described their writing processes. These descriptive pieces were not chosen to be representative of arts, science or social science, but simply to show contrasting views. Pieces A and C (see questionnaire appendix) are quotations from two psychologists, Liam Hudson and Henri Tajfel, respectively, and can be found in Cohen (1977). Piece B was an anonymous quotation taken from Lowenthal & Wason (1977).

  Not surprisingly perhaps few respondents could identify themselves whole-heartedly with the descriptions of A, B, or C, and nearly all added qualifications. However, for the record, the numbers that did choose A, B, or C as nearest to themselves were as follows:

	Choice		
	A	B	C
Arts	4	2	12
Social Science	2	2	7
Science	0	2	9

Clearly, for some reason or another, C seems the most representative, but some of the following comments seem pertinent:

> None of the descriptions is remotely like the process I call writing. (Social Science)
>
> Possibly C—if any. (Social Science)
>
> Description C is certainly the nearest. (Science)
>
> None of them. Am I odd or are they? (Science)

Discussion

The results obtained above may be commented on in different ways. In this final section we shall try to draw a summary picture of the results, to point out their importance for instructional purposes, and to comment on the limitations of the method of enquiry that was used.

A Summary Picture

The results give a broad general picture but one which is more detailed than that presented by Lowenthal & Wason (1977). Both studies point to an enormous variety in the methods used by and in the attitudes of academics in academic writing. Nonetheless, two additional points of interest stand out. Firstly, there seems to be very little difference between the British and Canadian academics who completed our questionnaire. Secondly, there seem to be some differences between the approaches of academics in the three different faculties.

Arts and science writers (on the whole) appear to differ in how they go about writing as a consequence of why they write and how they structure their approach. Arts writers appear to go more for the argument, working from the 'top down' as it were, whereas scientists seem more inclined to write individual components and work from the 'bottom up'. This may be connected with the greater need among those in arts as noted earlier for intrinsic rewards (the satisfaction of sorting out one's ideas and developing one's thinking) compared with the greater need in scientists for extrinsic rewards (getting into print, advancing one's field, etc.). Nonetheless, once these differences have been described (and it has once again been observed that there are no hard and fast rules here) it does seem as though the mechanics and processes of writing appear to be fairly similar between writers in the different faculties.

This being the case, it is possible to offer a tentative overview, or summary of the findings in the form of a 'profile' of the average academic writer (see Fig. 1). This profile is arrived at simply by recording the most frequent responses for each of the questions. Clearly no single academic writer fits the profile exactly and, of course, as noted earlier,

the same writer may adopt different strategies for different purposes (short article versus book chapter, for example). One limitation of such a 'profile' is, of course, that it tends to imply that writing is a linear process—first one plans, then one writes, and finally one revises—and that there are no recursive features in the writing process. Such a description is far from true. As Humes (1983) puts it, "Writers move back and forth among subprocesses. All of the planning is not done before words are put on paper; all of the words are not put on paper before writers review and revise".

The results of the questionnaire suggest that the average academic writer:
wishes to communicate and explain some important issue which is of interest to him or her;
structures the problem in terms of the requirements of the topic and the reader;
works on one section at a time;
does not necessarily write these sections in order;
is likely to produce three or four drafts;
writes initially in longhand;
avoids dictation;
uses a secretary to type the final draft;
and often asks colleagues to comment on what has been written.

The academic writer:
enjoys writing—but often finds it a struggle;
experiences writer's blocks—but usually solves these by doing something different;
writes at various times of the day;
likes peace and quiet—rather than use particular aids to help writing;
spends a fair amount of time writing;
often collaborates with others;
and finds the task self-fulfilling.

Fig. 1. A profile of the academic writer.

Implications for Instruction

Fig. 1 has certain implications for instruction. It suggests the need for description before prescription. Most academics start their professional writing with little explicit guidance from their colleagues. Techniques, tricks and tools of the trade are picked up from others during college. In the sciences standard formats are available for novices to follow. Style-manuals, textbooks and articles on how to write reports and dissertations, and advice from journal editors on academic writing, are all available (e.g. Gowers, 1973; Cooper, 1964; Maher, 1978; Scarr, 1982; Turabian, 1982; APA, 1983; Howard & Sharp, 1983). Materials such as these are written on the basis of tacit knowledge, and although they proffer useful advice, it is not clear how much of this advice is supported by any factual evidence. As we can judge from the replies to the questionnaire, the advice given by any one writer on the basis of his/her judgement might be very different from the advice given by any other.

   The value of the questionnaire approach is that it describes the possibilities available. It allows both novices and experts (should they ever read this paper) to see how or what they do fits in with what others do—perhaps more expert than themselves. Furthermore, it allows them to consider possibilities that they have not seen expressed before. To take an explicit example, it would seem (from the results) that almost all academic writers experience 'writer's blocks' of one kind or another. This is comforting to know. But what advice do experts normally give to research students when they report that they cannot get down to writing? Telling them to 'Go away and do something else' (which appears to

be what the majority of writers actually do) may not seem helpful—especially if procrastination is their problem. It may be better to advise them to start by re-writing the last page they wrote—to extend the advice given by one of the respondents—or to suggest, as another did, that they always finish in the middle of a section so that they need to start next time by completing it.

Writing is a complex activity. None of the respondents explicitly mentioned the value of separating out sub-elements within the task and treating them separately, although it was clear from what some of them wrote that this is what they sometimes did. Thus some separated planning from transcription. And some separated transcription from editing and revising. Some contemporary writers strongly advocate this approach (e.g. Elbow, 1973; Wason, 1970, 1983). Thus, it is argued, one should first write rapidly, getting down the main points of what needs to be said, and then one should go back later to work at the niceties of grammar and style. As Wason (1970) put it: "My own practice, which may have some generality is to write a complete first draft (of an article) at a single sitting, as quickly as possible, even if it is disjointed and lacking in cohesion." In another description Wason (1983) put the matter more succinctly: "First say it, and *then* try to say it well."

Wason argues that this approach is particularly satisfying. Once writers have some text before them they are able to test their assumptions, to re-think their conclusions and develop new lines of enquiry. The potential of word-processing for this process seems enormous. Word-processing is particularly suited to text that has a complex organisational framework, detailed technical aspects (e.g. lists of references) and has a frequent need for editing and revision. Yet it seems clear from the results reported in this paper (which were obtained in 1983) that our rather sophisticated group of potential users seemed strangely reluctant to take advantage of these new methods of writing and editing. Maybe this will change as word-processing facilities become easier to use and when they become more familiar in our offices and homes. Certainly many educators are interested in developing computer-aided writing in our elementary schools (e.g. Garland, 1982; Lawlor, 1982).

Methodological Problems

All of this discussion supposes, of course, that the results presented here are representative of academic writers as a whole and that they reflect the total experience of academic writing. Of course this position cannot be sustained. First of all, and obviously enough, the return rates from the questionnaire have been low. It is likely that those respondents who were interested in the topic of writing replied, whereas those who were not interested or not involved did not. Indeed, for the Keele sample, it was possible to check authors' publication rates over the last 2–3 years with whether or not a response was received. The results showed that the median number of publications over 1980–82 for the respondents was 3 (range 0–21), whereas for the non-respondents the median was 1 (range 0–29). This difference was statistically significant ($p < 0.03$, one-tail test). It is likely, therefore, that the profile given in Fig. 1 reflects the academic who is more interested in writing rather than the academic in general.

Perhaps worthy of more serious consideration, however, is the fact that the questionnaire method is not an entirely appropriate one for studying the *process* of writing. The method produces rough and ready global descriptions (which may or may not be entirely truthful) and it does not (nor does it aim to) give precise details. A more fine-grained analysis is needed for researchers interested in the processes of writing, and such an

analysis will involve a more detailed study of particular individuals. Although a start has been made along these lines (see Emig, 1971; Humes, 1983) it is hoped that the publication of this paper will stimulate further work in this direction.

Acknowledgements

Correspondence: Dr J. Hartley, Department of Psychology, University of Keele, Keele, Staffordshire ST5 5BG, England.

REFERENCES

APA (1983) *Publication Manual of the American Psychological Association,* 3rd ed. (Washington, American Psychological Association).

ANDERSON, P.V., BROCKMAN, R.J. & MILLER, C.R. (Eds) (1983) *New Essays in Technical and Scientific Communication: Research, Theory and Practice* (Farmingdale, New York, Baywood).

BAZERMAN, C. (1983) Scientific writing as a social act: a review of the literature of social science, in: ANDERSON, P.V., BROCKMAN, R.J. & MILLER, C.R. (Eds) *New Essays in Technical and Scientific Communication: Research, Theory and Practice* (Farmingdale, New York, Baywood).

COHEN, D. (1977) *Psychologists on Psychology* (London, Routledge & Kegan Paul).

COOPER, B.M. (1964) *Writing Technical Reports* (Harmondsworth, Penguin).

DUNSHEE, T. & FORD, T. (1980) *Mark My Words: a Study of Teachers as Correctors of Children's Writing* (London, Ward Lock).

ELBOW, P. (1973) *Writing Without Teachers* (London, Oxford University Press).

EMIG, J. (1971) *The Composing Processes of Twelve Graders,* Research Report No. 13 (National Council of Teachers of English, Urbana, Illinois).

FOX, M.F. & FAVER, C.A. (1982) The process of collaboration in scholarly research, *Scholarly Publishing,* 13, pp. 327–339.

FREDERIKSEN, C.H. & DOMINIC, J.F. (Eds) (1981) *Writing: the Nature, Development and Teaching of Written Communication, Vol. 2, Process, Development and Communication* (Hillsdale, New Jersey, Erlbaum).

FULWILER, T. & YOUNG, A. (Eds) (1982) *Language Connections: Writing and Reading Across the Curriculum* (National Council of Teachers of English, Urbana, Illinois).

GARLAND, R. (Ed.) (1982) *Micro-computers and Children in the Primary School* (Lewes, Falmer Press).

GOWERS, E. (1973) *The Complete Plain Words,* 2nd ed. (Harmondsworth, Penguin).

GREGG, L.W. & STEINBERG, E.R. (Eds) (1980) *Cognitive Processes in Writing* (Hillsdale, New Jersey, Erlbaum).

GRIFFIN, C.W. (Ed.) (1982) *Teaching Writing in all Disciplines* (San Francisco, Jossey-Bass).

HARTLEY, J. (Ed.) (1980) *The Psychology of Written Communication: Selected Readings* (London, Kogan Page/New York, Nichols).

HOWARD, K. & SHARP, J.A. (1983) *The Management of a Student Research Project* (Aldershot, Gower).

HUMES, A. (Ed.) (1981) *Moving Between Practice and Research in Writing* (Los Alamitos, California, SWRL Educational Research and Development).

HUMES, A. (1983) Research on the composing process, *Review of Educational Research,* 53, pp. 201–216.

JONES, J. (1980) *Writing, Setting and Marking Essays* (Teaching Resources Centre, University of California, Davis).

KRESS, G. (1982) *Learning to Write* (London, Routledge & Kegan Paul).

KROLL, B.M. & WELLS, G. (1983) *Explorations in the Development of Writing* (Chichester, Wiley).

LAWLOR, J. (Ed.) (1982) *Computers in Composition Instruction* (Los Alamitos, California, SWRL Educational Research and Development).

LOWENTHAL, D. & WASON, P.C. (1977) Academics and their writing, *Times Literary Supplement* June 24th, p. 782.

MAHER, B.A. (1978) A reader's, writer's and reviewer's guide to assessing research reports in clinical psychology, *Journal of Consulting and Clinical Psychology,* 46, pp. 835–838.

MARTLEW, M. (Ed.) (1983) *The Psychology of Written Language: Developmental and Educational Perspectives* (Chichester, Wiley).

MOSENTHAL, P., TAMOR, L. & WALMSLEY, S. (Eds) (1983) *Research on Writing Principles and Methods* (New York, Longmans).

NYSTRAND, M. (Ed.) (1982) *What Writers Know* (New York, Academic Press).

OVER, R. (1982) Collaborative research and publication in psychology, *American Psychologist*, 37, pp. 996–1001.

PHELPS-GUNN, T. & PHELPS-TERASAKI, D. (1982) *Written Language Instruction, Theory and Remediation* (Rockville, Maryland, Aspen).

PULLINGER, D. (1983) Attitudes to traditional journal procedure, *Electronic Publishing Review*, 3, pp. 213–222.

SCARR, S. (1982) An editor looks for the perfect manuscript, in: *Understanding the Manuscript Process—Increasing the Participation of Women* (Committee of Women in Psychology and Women's Program Office, Washington, American Psychological Association).

SCHUMACHER, G.M., KLARE, G.R., CRONIN, F.C. & MOSES, J.D. (1984) Cognitive processes during pauses in writing, in: *Thirty-second Yearbook of the National Reading Conference* (in press).

SMITH, F. (1982) *Writing and the Writer* (London, Heinemann).

SPENCER, E. (1983) *Writing Matters* (London, Hodder & Stoughton).

TURABIAN, K.L. (1982) *A Manual for Writers of Research Papers, Theses, and Dissertations* (London, Heinemann).

WASON, P.C. (1970) On writing scientific papers. Reprinted in HARTLEY, J. (Ed.) (1980) *The Psychology of Written Communication: Selected Readings* (London, Kogan Page/New York, Nichols).

WASON, P.C. (1983) Trust in writing. Paper available from the author, Department of Phonetics and Linguistics, University College, London, UK.

ZINSSER, W. (1980) *On Writing Well: an Informal Guide to Writing Non-fiction* (New York, Harper & Row.)

Appendix

Dear

I am collaborating with a colleague at the University of Keele, England in a study of academic writing in which we are investigating how colleagues from different disciplines go about the task of professional writing—by which we mean writing academic books, journal articles, papers for conferences, and so on. Dr James Hartley, head of the Psychology Department of Keele, is presently gathering information from faculty at that institution, and I am approaching a small sample of individuals at Waterloo in the hope of obtaining some comparative data.

We are interested in two aspects of academic writing—people's *attitudes* to the task of writing and the *procedures* that they use. Accordingly we have listed a set of questions in each area which we hope might serve to indicate the kinds of things we are interested in learning.

What we would like you to do, if you can spare the time, is to:

(1) Write a paragraph or two outlining the procedures you use when writing academic materials (books, articles, etc.). You may find it helpful to use the attached list of questions as prompts.

(2) Write a paragraph or two outlining your attitudes to the academic writing process (once again, the attached list of questions can be used as prompts).

(3) Read the general descriptions of writing (labelled Paragraphs A, B, and C on the reverse of the sheet of questions) and indicate which description seems nearest to your own approach to academic writing. You may wish to underline those passages that seem most relevant to your own way of working. Please add any explanatory comments you feel necessary.

(4) Indicate your department at UW and how long (approximately) you have been teaching in higher education.

If you wish to respond confidentially, please do so. However, if you have no objections to giving your name, please add it to your response in case we want to explore details with you at a later date. Signed or not, all responses will be treated confidentially.

If you would like a summary of the results in due course, would you please indicate this.

We do hope you will be able to find time to respond to this request, since the information you could give us would be very useful. Please do not feel because you are not a prolific writer that your response is of no interest to us—we would like to get information from those who do a lot of academic writing as well as those who do relatively little. If I can provide any further information about the study please feel free to telephone me at extension 2579.

Yours sincerely,

Questions

Section A. Procedures in Academic Writing

1. What makes you decide that you want to write an article/book?
2. How do you think about the structure of what you are writing?
3. Do you normally write a complete article/chapter etc. at one sitting, or do you work on one section at a time?
4. Do you write from the beginning to the end, or do you write some sections out of sequence?
5. Do you produce several drafts? If so, how many? What functions do they serve? How do the drafts change?
6. Do you write in longhand, use a typewriter, or a word-processor—or combinations of these tools?
7. Do you ever dictate your articles? If so, what are the advantages and limitations of this method?
8. Do you ever collaborate with others in writing papers or books? If so, how often? How do you arrange the various tasks between you?
9. What role, if any, does a secretary play in the production of your articles?
10. Do you ask your colleagues to read and comment on what you have written?

Section B. Attitudes to Writing

11. Do you enjoy writing?
12. What do you like most about writing? And what least?
13. Is writing a struggle, or does it come easily?
14. Do you write at particular times of day?
15. Do you use any particular aids to help you write (like a particular desk or place, background music, etc.)?
16. Do you ever get writer's 'blocks'? If so, how do you overcome them?
17. Do you spend much time writing? Is writing important to you? Do you feel frustrated if you are prevented from writing?
18. Have you done any writing for publication in addition to academic writing—e.g. newspaper articles, fiction, poetry, etc.? If so, could you comment on the differences from/similarities to your academic writing?

Section C.   General Descriptions

19. Which of the descriptions overleaf produced by other academics (not at Keele/Waterloo!) most nearly fits you (if any)? Please list the paragraph by letter (A, B or C) and add any explanatory comments you feel necessary. You may wish to underline passages that describe your own approach to writing.

20. Finally, would you please indicate your department and how long (approximately) you have been teaching.

Some Descriptions of Writing

A. "I rewrite absolutely everything. I do, in practice, at least nine or ten drafts. The first things I do are always ridiculous. They don't come to life until I redraft them many times. For instance, I've just written what I think will be an eighty thousand word book, and I will have written well over a million words to get that. There's something immensely punishing about the process. But in it there's the subtle gratification that, a very long long way down the path, you're back in the land of the luminous ideas where you began. You're back, but your ideas have a shape, and you're in less of a daze."

B. "The initial gurgitation of material builds up high pressure of nervous excitement, leading to such physical symptoms as redness in the face, headache, inability to sit down, lapses of concentration and extreme short temper, especially on interruption. Ordering the material presents agonising problems of rethinking and usually destroying whole bodies of the original material: problems of sequencing often lead to inability to write down a coherent sentence ... The final process (is) well nigh unendurable!"

C. "I tend to write at home and mainly in the morning when I can get a free morning, and I discover after five hours I have two pages covered. That's all. Well, if you can do two pages in five hours, you can do twenty pages in fifty hours so it's not too bad. This is where the pleasure and the frustration come in. This is also the time when I really think. I really think when I write. That is why it is not so crucially important to have direct intellectual contacts, day to day, with other people, because I really know that I only think when I sit down on my own and write ... But it's up and down, up and down, a difficult business."