Reflections on Two of Our Early Ancestors

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It is a pleasure and privilege for me to pay tribute to Walt Lonner with this chapter,[1] an old friend and comrade-in-arms in the field of cross-cultural psychology. Walt played a very significant part in our own, more recent history. In the early stages of a new approach one finds a few individuals pursuing their interests and ploughing a lonely furrow. But as that interest widens and becomes shared by an increasing number of people, there arises a need to have a focus for the common endeavour; and such a focus is provided by a journal. It is Walt's achievement that he has laid the foundations for our journal, the Journal of Cross-Cultural Psychology, and after more than a generation he still remains closely associated with it. All of us owe him a debt of gratitude for having provided us with a forum.

My chapter goes even further back, to the turn of the 20th century. It deals with two individuals who were concerned with what we call cross-cultural psychology long before that expression was coined. They are William Halse Rivers and Richard Thurnwald. The two men were different in their backgrounds and outlooks, and I shall say rather more about Thurnwald. This is not because he was more important –he was not– but because some of you may already have read something about Rivers, while it is most unlikely that you have come across Thurnwald whose psychological work has not been translated.

William Halse Rivers (1864-1922) had studied medicine and worked on the neurophysiology of the senses with Sir Henry Head, later becoming interested in psychiatry and psychology. He became Lecturer in Experimental Psychology at Cambridge University, and was thus thoroughly versed in experimental methods. At that time a Cambridge anthropologist, Alfred Haddon, organised an expedition to Torres Strait, a cluster of islands between northern Australia and Papua New Guinea. He had the then quite novel idea of including psychologists in his team, and invited Rivers, who in turn recruited some of his students, all of whom later gained distinctions. I shall just mention William McDougall, who in due course became professor of psychology at Harvard. The team set out in 1898 and remained in the field for about a year. As a result of his experiences with the Expedition, Rivers later turned to anthropology and also became prominent in this sphere. His career was interrupted during the first world war, when worked as a psychiatrist dealing with shell shock. He then returned to Cambridge where he was active in promoting psychology.

Let me now turn to the psychological investigations in Torres Strait, which were confined to sensory processes and included reaction time, hearing, taste, and the sense of smell. Rivers himself concentrated on various aspects of vision. One topic was visual acuity, an issue them much discussed. At that period there existed a belief Rivers wanted to test: namely that the senses of 'primitives' were much more acute than those of Europeans. For instance, it had been claimed by a traveller that 'savages' could see ships on the horizon long before Europeans. Rivers was able to disprove this, showing that in their environment they were able to make better use of small cues.

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His most famous and influential work was with visual illusions. A popular idea at the time was that 'primitives', being rather stupid, would be more readily deceived by geometric illusions. Again he was able to disprove this notion. For instance, with regard to the well-known Müller-Lyer illusion, Rivers found his subjects to be *less* susceptible than Europeans. This provided the inspiration for one of the most extensive cross-cultural studies ever attempted, namely that of Segall, Campbell and Herskovits in the late 1950s (Segall et al., 1966). They sought to explain the difference in terms of the so-called 'carpentered world hypothesis', whereby our predominantly rectangular environment leads to certain visual inference habits. Numerous other illusion studies followed, reviewed by Deregowski (1980).

Rivers displayed considerable ingenuity in devising new methods. When trying to establish peoples' colour vocabulary, he created discussion groups in which people had to agree on colour names. He also used what are now called 'non-reactive' methods. So in order to find preferences for colours, he systematically observed what colour clothing people were wearing.

Let me now go back and explain another, theoretical reason why Rivers confined himself purely to sensory processes. Rivers noted the fact that the 'savage' is an acute observer of nature who has a very detailed knowledge of the flora and fauna in the environment. He went on as follows:

> "*Minute distinctions of this sort are only possible if the attention is predominantly devoted to objects of sense, and I think there can be little doubt that such exclusive attention is a distinct hindrance to higher mental development. . . If too much energy is expended on the sensory foundations, it is natural that the intellectual superstructure should suffer*" (Rivers 1901, p. 44/5).

This explanation of 'savage' intellectual inferiority is precisely that put forward by the 19th-century social evolutionist Herbert Spencer, who had argued that if too much energy is devoted to the 'simpler faculties', then it is not available to the higher ones. Rivers had been reading Spencer in the course of the voyage to New Guinea, and was persuaded at the time. Subsequently, when he had undertaken anthropological fieldwork and had come into close contact with indigenous peoples, Rivers himself came to repudiate his earlier views; he then wrote: 'I have been able to detect no essential difference between Melanesian or Toda and those with whom I have been accustomed to mix in the life of our own society.'

Generally, Rivers was a pioneer who carried out the first systematic and experimental series of studies in a non-western culture, and is thus rightly regarded as the first cross-cultural psychologist.

Let me now turn to the other ancestral figure and begin by saying something about his background. Richard Thurnwald (1869-1954) was born in Vienna where he studied law and became interested in the social sciences. In 1897 he went to Bosnia where he carried out research on what we would call acculturation, or adaptation to modernity. He then went to the University of Graz in Austria, where he worked with the prominent sociologist Ludwig Gumplowicz from whom he probably derived a conviction of the key importance of 'socio-psychic' phenomena. From Graz he went to Berlin, where he took courses in anthropology and attended lectures on the psychology of 'primitives'.

In 1905, Thurnwald was selected by the Berlin Ethnographic Museum for a research expedition to what was then a German colony in the Papua-New Guinea area. At the time he had been engaged in drafting a sociological questionnaire, on which he commented *'I tried to put psychological questions very much in the foreground, since everything social is in effect something psychological'*. Furthermore he approached Carl Stumpf for advice. Stumpf was the successor of Ebbinghaus in the chair at Berlin. His special field was the psychology of music, and he had founded an institute for collecting recordings of 'primitive music' from all over the world. When approached by Thurnwald, Stumpf not only consulted with colleagues, but put the

issue before the Second Congress of Experimental Psychology, in 1906. This resulted in a collection of problems in a wide range of fields of psychology, on which Thurnwald drew. At the end of that year Thurnwald arrived in the Solomon Islands where he worked until returning in 1909. It was in the course of this expedition that he conducted his pioneering 'ethno-psychological' studies. After he had returned from the first field trip the collection of psychological research topics suggested at the Congress was published, and he wrote an introduction (Thurnwald, 1912).

Thurnwald went on a second expedition in 1913, that was brought to an untimely end by the outbreak of the first World War. Australia invaded German New Guinea, and he remained marooned there. From his diary, which I was able to consult at the Berlin Ethnological Museum, it appears that he undertook further psychological work during that waiting period, but it was never published. In 1915 he was permitted to travel to California –the USA had not yet entered the war– and later returned to Germany.

Thurnwald's psychological work was published in 1913 under the title *Ethno-psychological studies*. Unlike the early Rivers he rejected the 'energy' theory mentioned above and determined to include in his studies the higher mental processes. In his introduction Thurnwald noted that there are two main directions of research, either aimed at universals or at differences, his own research being mainly concerned with the latter. He explained that, as an anthropologist, his main effort had been devoted to ethnographic issues, so that his psychological research was necessarily secondary. He made it clear that, unlike Rivers, he was mainly concerned with what we would call "the higher mental processes". I shall now present a selection of some of his studies, which have not been translated from the original German.

Colour names

This topic had been studied extensively by Rivers, and although Thurnwald made no direct mention of Rivers in this connection, there is little doubt that he was inspired by that work. Like Rivers he found that the bulk of colour names were linked to naturally occurring objects (e.g. in our case we have terms like 'snow-white' or 'brick-red') and were not monoleximic (e.g. 'white' or 'red'). In one of his experiments Thurnwald asked his subjects to select and then name the colours of a standard set of wool threads. The first four chosen were black, white, red, and bluish-green. This corresponds well to the evolutionary sequence postulated by Berlin & Kay (1969).

Memory

Having established his subjects' capacity to discriminate certain colours, he assembled five batches of wool consisting respectively of saturated yellow, green, white, red, and blue. He laid them out in that order and covered them with a black cloth. He then exposed the batches for one minute, covered them, waited another minute, and then asked his subjects to arrange them in the same sequence. Only one individual was able to perform the task correctly. In all but one of the cases blue was positioned correctly, which Thurnwald thought odd, since they had no name for blue. However, it is likely to have been a serial position effect.

Counting

This was an interesting task, recorded in full detail. It is somewhat reminiscent of the of course far more sophisticated study undertaken later by Carraher et al. (1985) in Brazil.

Matches and twigs were used in order to ascertain what quantities could be assessed at a glance, and to analyse the modes of calculation. For this purpose the pieces were placed on a table in a single heap or in several distinct groups, and covered before exposure. The task was to name the quantity of items on the table as quickly as possible. and the grouping carried out by the subjects when counting was noted. Here is an example:

The following groups are presented: 5, 5, 5, 4, 5, 5 (=29)
Counts 5 (two of them at once, rapidly)=10
+5 = 15
+4 = 19
[+5 (split into 1 + 4)]
counts 19 + 1 = 20
+ 4 = 24
+ 5 = 29

Certain common tendencies are described, for example that of splitting numbers in order to arrive at tens. Thurnwald explained that this corresponded to the indigenous number system, a system rather like that later described by Lancy (1983) in another part of New Guinea.

It seems that no more than four sticks were ever apprehended simultaneously as a number. For instance, if a group of five sticks was shown, they were either counted individually or split into smaller groups. Where it was possible to reach equal sub-groups, the correct result was reached much more rapidly than when they had to be unequal. Thurnwald observes wryly that the calculations were no great joy for the subjects, who much preferred other 'games'.

Word Associations

For this, curiously, the then standard German word list by Sommer was used. A linguistically competent Methodist missionary acted as interpreter. As might be expected, considerable translation difficulties were encountered. For instance, there was no single equivalent for monoleximic 'red'; one vernacular term denoted red-brown earth, while another referred to blood; I have already mentioned the context-bound nature of most colour terms. It is evident that these problems proved in many cases insuperable.

Nevertheless he gave it as his view that 'these experiments on the mechanisms of thinking are particularly valuable'. In fact, although he was evidently not aware of it, the material does contain some clues that can be culled from his summary of response types:

(i) Mere repetition or circumlocution;
(ii) the property of a particular object is named, e.g. 'the tree' = bears fruit, or 'the house' = one sleeps in it.

If one assumes that the informants interpreted their task as something like a request for a definition, which is perhaps not unreasonable, then the responses may be compared to those obtained by Luria during the 1930s from unschooled people in Uzbekistan (Luria, 1976). There too the predominant modes of response were either repetition or what we now call a *functional* definition.

Transmission of reports

All subjects were associated with the Mission, four being pupils and one an old man attached to it. The first out of a total of five people was told a story about a journey, which he had to repeat to the second one, and so on to the fifth. The story content was partly indigenous (e.g. 'I saw Duk-Duk dancers') and partly western ('I travelled in a steamer') and consisted of 12 separate elements. The results of this test are described and discussed at considerable length. There is no need to go into details here, and I shall only be mention that the younger subjects performed quite well, with an average of about 7 out of 12 correct. The old man failed more or less completely and responded: 'my inside is not capable of retaining what he said.'

Some of you will no doubt have recognized that this experiment was precisely what Bartlett (1932) later called *The Method of Serial Reproduction*. Moreover, there is another suggestive parallel: both Thurnwald and later Bartlett commented that their experiments constituted a model of cultural transmission from one population to another. This is unlikely to

have been a mere coincidence, and therefore presents an intriguing puzzle. Bartlett first embarked on his experiments as early as the first World War, and could have known about Thurnwald's monograph that had appeared one year before. However, Bartlett made no reference to it in his famous book on *Remembering;* and Bartlett was not the kind of person who would have deliberately omitted it. Hence it seems that he must have obtained information from some other source. One can surmise that the connecting link was probably Rivers, who also did fieldwork in New Guinea, and was in contact with Thurnwald; and Bartlett was then a student of Rivers.

Experimental Drawing

Towards the end of the 19th century there arose a considerable interest in the drawings of children and 'primitives', and so it is not surprising that Thurnwald spent a lot of time and effort on it. He took the view that 'what is observed and represented in proper order should be suitable as a criterion for intelligence.' However, he also recognised the unfamiliarity of the task and what we would call problems of sampling. So he abandoned his original aim of comparing the intelligence levels of ethnic groups and treated the drawings as 'indicators of culture', thereby anticipating later developments.

Geometric bodies

He presented such bodies to the subjects who were asked to copy them. Thurnwald suggested that 'the intellectual performance of observation and memory is here so simple that the whole effort can be devoted to the translation from the third to the second dimension, a predominantly intellectual task ...' It would seem that he greatly underestimated the difficulty of such a task for people encountering it for the first time. His descriptions of response types, exemplified in relation to a cube, are shown below:

1. An indicative representation confined to contours. The cube is drawn as a square.
2. A piecemeal descriptive procedure, communicating one's understanding: e.g. the cube is drawn as five squares.
3. A few unsuccessful attempts are made at perspective drawing.

Drawing experiments concerning natural objects

At the outset Thurnwald commented that his predecessors had usually just put a pencil in the subjects' hand asking them to 'draw something', while he specified the objects to be drawn. These included the human form, animals, plants, inanimate objects, boats, dwellings, and landscapes or scenes.

As regards human figures, while some were relatively naturalistic, he pointed out that cultural symbolism in terms of the supernatural or bizarre dance costumes were more often represented. Animals and plants, closely familiar to the subjects, were often quite accurately portrayed. When one compares these drawings done to command with indigenous symbolic representations, the greatly superior skills displayed in the latter are striking. Generally, Thurnwald discussed the drawings at length in the context of the cultural background, providing numerous valuable insights.

The remaining part of the monograph is ethnographic in character, dealing with vernacular languages, every-day life, and the rather favourable position of women. Of psychological interest is an account of child rearing, though dealing mostly with boys. It happens, he writes, that 3-4 year old boys are offered alternatively the mother's breast and a tobacco pipe. Upbringing was very lenient, and he never saw a child being beaten. Lastly, the impact of European culture is discussed.

In the course of his later career Thurnwald wrote extensively on the effects of culture on modes of thought (e.g. Thurnwald, 1922, 1928). This should not be taken to imply that he shared the then prevalent belief in the intellectual inferiority of Naturvölker [literally 'natural

peoples]. On the contrary, he was critical of the views of Lévi-Bruhl who had postulated a 'pre-logical mentality'. Since it is now the fashion to simply dismiss Lévi-Bruhl, it should perhaps be pointed out that Lévi-Bruhl had tried to answer an important question, namely why modes of thought differ across cultures. His answer was wrong, but for a while Lévy-Bruhl influenced even such great figures as Piaget.

Later in life Thurnwald largely abandoned his earlier psychological interests, concentrating on sociology and anthropology. His psychological writings were never translated from German, and he failed to get the recognition he deserved as a pioneer of cross-cultural work.

While Rivers was a brilliant experimenter, that cannot be said of Thurnwald. On the other hand Thurnwald specifically wanted to explore the higher mental processes, and had some original research ideas. He also expressed the hope that ethno-psychological research would in due course lead to an 'exact cultural psychology'. This chapter celebrates Walt Lonner's contribution to the move towards such an ideal.

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