

## **Blood for Water: The Aboriginal Story of Water in the Goldfields**

Sue Hanson

Linguist, Goldfields Aboriginal Languages Project

December 2014

*'The blacks are in a bad way... It's a pity something can't be done to help them, water being so scarce just now, all the soaks and gnamma holes are just about dry. There was a load of water arriving this afternoon from Raeside Soak over 30 miles away and it was dished out to the men at half a gallon. Each being 2/6 per gallon, so you see the poor blacks are robbed of their water. It's cruel.'* Clara Saunders 1902 <sup>1</sup>

Over many millennia, Aboriginal people have lived in the Goldfields region of Western Australia in family groups, travelling across their territory in sustainable patterns of hunting and gathering using traditional methods to farm the land and water. Warfare between Aboriginal nations was unknown; rather there were occasional skirmishes between groups or families. Between ten and 14 languages were spoken in the area as each group lived in their small nation according to their own laws, language and culture. <sup>2</sup>

Many of these laws related to the careful preservation of water and food resources, as both were scarce in such a dry and harsh environment. The landscape ranges from the Mediterranean climate of the Great Western Woodlands, to the desert of the eastern fringes, through to the scrubby sand plains of Southern Cross. However, the entire region is characterized by a lack of surface water and very minimal annual rainfall.

This immeasurable length of peaceable time was to come to an abrupt end when European settlers ventured onto the Aboriginal lands. Aboriginal possession of the land and waterholes was not recognized nor was any attempt made at developing a treaty. Rather, the land was seen as available for exploitation.

From the time of European settlement of the eastern flanks of Australia, explorers headed westward in a search for pastoral land and mineral wealth. Colonisation of the west coast of Australia saw an increase in the number of European explorers venturing through the Goldfields region.

In 1863, a party of men lead by Henry Maxwell Lefroy set out from York to the area that is now known at Coolgardie, in one of the first government backed explorations. In 1864 and again in 1865, Charles Hunt and his party explored the land specifically looking for pastoral and mineral bearing country. Their job was also to establish watering places to facilitate further exploration of the country. <sup>3</sup>

---

<sup>1</sup> *Notes from the Memories of Clara Saunders*: One of the pioneer women on the Coolgardie Goldfields. 1902 Battye PR7730

<sup>2</sup> *Ngalia Foundation Report*, Goldfields Aboriginal Languages Program, unpublished report, 2013

<sup>3</sup> *The History of Merredin*, F. A. Law, private printing 1961

In 1866 Hunt followed Aboriginal tracks from waterhole to waterhole digging a large number of wells, often at Aboriginal soaks and gnamma holes.<sup>4</sup> At least 28 wells and dams were constructed<sup>5</sup>. Forty years later, the construction of the Mundaring to Kalgoorlie pipeline followed the path of the Hunt wells. Dr. Samantha Bolton points out that, '*...the pipeline route largely followed the path of the explorer C.C. Hunt and that he had Aboriginal guides on his expedition. His journals do record a number of indigenous place names and further reference to his diaries may yield further clues about heritage values and water sources along his travel path.*'<sup>6</sup>

*'While Hunt's expedition had little immediate impact – the lack of rainfall and permanent water supplies hampering the movement in the region – they were to prove invaluable when gold was discovered at Southern Cross and Coolgardie some 20 years later.'*<sup>7</sup> National Trust 1994

The identification and mapping of water across the region brought many more European explorers and gold searchers. The discovery of gold in 1893 turned the trickle of venturers into a stampeded so that by 1903, 30 000 Europeans had swarmed into the Goldfields region. The town of Kalgoorlie had a population of around 20 000 people by 1897.<sup>8</sup>

The pressure on ancient water holes by such a vast number of people and their animals quickly destroyed many systems and the water sources often ran dry. Government condensers were established to produce potable water from salt water in lakes. This supply was still not enough to meet the needs of the Europeans and so by 1896 the government commissioned the building of a pipeline to bring water from Mundaring Weir in the Perth hills 530 kilometres through to the Goldfields town of Kalgoorlie. The pipeline was completed in 1903.<sup>9</sup>

By this time, thirst, typhoid and other illnesses due to a lack of water were rife in the European population. '*The fever wards at the Govt. hospital are simply full and about three deaths a day is the average of the town.*'<sup>10</sup> By 1893, water was 3 shillings a gallon, if it could be obtained at all.<sup>11</sup> This was roughly equivalent to a day's salary at the time.

Whilst the lack of water was a pressing need for the Europeans, the decimation and draining of their traditional water supplies had a devastating effect on the Aboriginal people. When these people attempted to defend their meager water

---

<sup>4</sup> Ad ibid

<sup>5</sup> *The Golden Pipeline Heritage Trail Guide*, National Trust WA

<sup>6</sup> *Summary Account of Aboriginal Heritage Values Associated with the Perth to Kalgoorlie Water Pipeline*, Donald Lantzke, unpublished paper, July 2014

<sup>7</sup> *The Golden Pipeline Heritage Trail Guide*, National Trust WA

<sup>8</sup> *Gold and Typhoid*, Vera Whittington, University of Western Australia Press 1990

<sup>9</sup> *The Golden Pipeline Heritage Trail Guide*, National Trust WA

<sup>10</sup> William de Mile 1896

<sup>11</sup> Ad ibid

supplies through a show of force, they were met with great disregard for their needs. Some Europeans understood the Aboriginal people's plight and defended their right to access traditional water supplies. *'That little supply of water was all the blacks had to depend upon and who could blame them for showing fight for what had been theirs for hundreds of years?'*<sup>12</sup> Albert Gaston 1984

*'They (Aboriginal people) have a good deal of trouble in getting water. At some condensers they get water for nothing when there are not too many; but at others they will not give them any. Before the white men ... the blacks obtained water at different rocks (rockholes)... Many of them came to Coolgardie from the district around, but many of the old ones died through fever and other complaints.'*<sup>13</sup> Fred McGill 1897

The condescending attitude of the day towards Aboriginal people relegated them to a position that is commonly referred to as that of 'flora and fauna'. This belief came about when the control for Aboriginal affairs was vested with the Fisheries Department between 1909 and 1920. The Department was subsequently renamed, 'The Aborigines and Fisheries Department.'<sup>14</sup>

Aboriginal people were not recognized as British citizens nor after Australian Federation in 1901 were they recognised as Commonwealth citizens. This situation did not change until a 1967 Federal referendum amended the wording of the constitution so that Parliament held the power to govern Aboriginal people. By default, the colonies, and then the states after Federation, took it upon themselves to govern Aboriginal people. During the early period of European settlement, Aboriginal people considered themselves to be citizens of their particular Aboriginal nation and were, in the vast majority, unaware that the British Government, the colonies and then the states took it upon themselves to govern them. It should be noted that Aboriginal people did not grant this power to the British Government nor the Commonwealth of Australia at any time. As far as Goldfields Aboriginal people were concerned, they owned their traditional land and were compelled by Aboriginal Law to protect the water sources, as was their responsibility from time immemorial.

Goldfields Aboriginal people became refugees in their own land as the Europeans invaded taking control of land and water. Violence against Aboriginal people extended beyond that needed for the Europeans' self-defense and warfare associated with land invasion. Murders and massacres of Aboriginal people became commonplace with little to no police protection provided. Therefore, many Europeans felt justified in restricting or not allowing access to precious water supplies. *'The diaries of early prospectors reveal quite candidly the attitude of the Whites: Aborigines were merely another obstacle to exploration and the discovery of gold.'*<sup>15</sup> Pascoe and Thomson 1989

---

<sup>12</sup> *Coolgardie Gold*, Albert Gaston, Hesperian press 1984 chapter 17, page 181

<sup>13</sup> *Letter in the Kalgoorlie Miner* by Fred McGill, 16<sup>th</sup> December 1897

<sup>14</sup> *State Records Office of Western Australia*

<sup>15</sup> *In Old Kalgoorlie*, Robert Pascoe, Frances Thomson, WA Museum 1989, page 225

*'The blackfellows were somewhat wild (in some areas), but beyond that they were quiet. They were wild because of white men shooting into their camps.'*<sup>16</sup> Fred McGill, An Aboriginal man, wrote to the Kalgoorlie Miner Newspaper attempting to seek understanding for his people and bring an end to the indiscriminate violence.

Violence against Aboriginal people extended to the desire for racial genocide. *'These wretched savages with their filthy habits and loathsome appearance are not, and never by any possibility can be, our equals. That in the external order of events that are bound at no very distant period to become extinct, we believe, and rejoice at that fact.'*<sup>17</sup> Editorial Kalgoorlie Miner 1899

Leslie Robert Menzies, after whom the town Menzies is named, states matter of fact about killing Aboriginal people, *'There they were, natives throwing spears. My boys, crouched behind pack-saddles, were taking pot-shots at every opportunity... We had a merry time for several moments, but bullets own the day. The natives retreated, eight dead.'*<sup>18</sup>

Menzies laid explosives at a waterhole (unknown year) and describes the massacre of Aboriginal people who came to drink there in a chillingly off-hand manner. *'Then the fun began. Spears began to come from all sides, then I heard the boom of buried dynamite. Dirt, shrubs and blacks went up into the air. I heard some agonized yells and mad scrambling among the rocks. I threw a few hand grenades, but no more spears came whizzing about me. I had evidently given them a good scare. At daybreak I walked out to view the 10-minute battlefield. Fourteen dead natives. Blood trails led all over the place, but not a soul in sight.'*<sup>19</sup>

The condescending attitude became enculturalised within the European population. Aboriginal people were seen as a resource to be exploited, none more so than the women. So common was the rape and forced sexual slavery of Aboriginal women that it was recorded as a thing of brevity in many settler's diaries and accounts.

*'For their delectation they caught some lubras (women) from the local tribes and chained them to the trees in their camp. The natives reciprocated by spearing their horse with the result that the party went out, as they said. 'buck shooting', and left 32 corpses to rot in the sun.'*<sup>20</sup> Charles Deland 1897

*'In the Widgiemooltha district it is becoming 'the recognized thing' for a prospector to procure a black gin and keep her in his camp... And so established has become the custom that more than one instance has occurred where the prospector has*

---

<sup>16</sup> *Plea for WA Aboriginals*, Kalgoorlie Miner 14<sup>th</sup> December 1899

<sup>17</sup> *Editorial*, Kalgoorlie Miner December 1899

<sup>18</sup> *White Gold Rush, Black Pain*, Age Newspaper, Melbourne, 2<sup>nd</sup> July 1984 page 11

<sup>19</sup> *In Old Kalgoorlie* Robert Pascoe and Frances Thomson, WA Museum, 1989, page 227, from *White Gold Rush, Black Pain*, Age Newspaper, Melbourne, 2<sup>nd</sup> July 1984 page 11

<sup>20</sup> *A Lost Glitter : Letters between SA and WA Goldfields*, editor Michael R. Best, Wakefield Press, 1986, page 231

*sold his camp and his gin to his successor, and the price has been high or low according to the beauty of the 'animal'. Around Widgiemooltha a black gin is a part of a prospector's camp furniture – a luxury he never attempts to conceal.'*<sup>21</sup> *The Groper's Slave 1900*

Conflict between Aboriginal and European men arose when women were forced into sexual slavery. *'A man named Anderson, known as New Zealand Jimmy, has been willfully killed by a blackfellow named Jimmy, near Siberia. Anderson had been living with Jimmy's black gin for some time. Frequent quarrels took place between the two about the possession of the woman, who is described as a handsome (sic) lubra. On Wednesday last Anderson thrashed the native and burned his mia mia, in order to drive him from the locality.'*<sup>22</sup> 1895

In this environment of condescension, violence and race hatred, Aboriginal people attempted to continue with the traditional laws and practices they knew were essential for the continued management of water supplies. Access to water equated to life in this dry region.

Goldfields Aboriginal law enshrines great respect for water sources. Rock holes were carefully managed to ensure the water's sustainability, cleanliness and availability. Many laws and practices about the management of water sources had meant adequate water was available for thousands of years. There are accounts that Aboriginal people quite readily shared their water supplies and locations between Perth and Southern Cross as water was more available in this region. However, between Southern Cross and the Western Australian border, people were reluctant to share information about their water sources not only because of the scarcity of water but because of traditions and laws. *'They say that the men of their tribe will kill any savage who gives up the secret of these precious waterholes.'*<sup>23</sup> *Argus 1895*

*'We tried every way to get her to take us and Charley Cooper said he would take her to her tribe if she would show him the gold. 'No, no,' she went on to say, 'No show'um gold.' If she did she would have a curse put on her by the man who carries the bone, and she would go blind, the blacks know that where the white man finds gold the white man always stays and the black man has to go.'*<sup>24</sup> *Saunders 1902*

Many of the water sources in the Goldfields are gnamma holes. These are deep narrow holes in a rock that act like water tanks and store quantities of water underground. They are usually filled as rain runs off from the rock. Aboriginal people had enhanced many of the gnamma holes or the gutters that fed the holes by chipping and shaping over thousands of years to ensure the water ran into the underground tank. *'During the gold-rushes, Aborigines, who for countless generations had used these rocks as their source of water, shared or revealed their*

---

<sup>21</sup> *The Groper's Slave*, Bulletin, Sydney 7<sup>th</sup> July 1900 page 23

<sup>22</sup> *A Goldfields Tragedy*, The West Australian Newspaper 30 April 1895 page 5

<sup>23</sup> *A Coolgardie Experience*. (1895, February 16). The Adelaide Standard, Warwick Argus, p. 7.

<sup>24</sup> *Notes from the Memories of Clara Saunders: One of the pioneer women on the Coolgardie Goldfields*. 1902 Batty PR7730

*locations for the sake of desperate thirsty men, at first voluntarily, later at times by coercion.'*<sup>25</sup> Whittington 1990

Incidents of Aboriginal people being tortured to reveal their traditional water sources are scattered through the newspapers, diaries and literature of the 1890s. *'The prospectors out back give them a day or two to find water; if they do not find it then they tie the nigger to a tree and keep him there until he is dry as the inside of an oyster shell. They let him go and follow him. As a rule the coon makes a straight dive for the nearest water.'*<sup>26</sup> Whittington 1990

Desperate men do desperate things when crazed by thirst. When encountered with an Aboriginal person who was reluctant to reveal a water source, the same writer details, *'Then he was fed on dry damper and salt fish, and tied to a tree until morning. At daylight he got another ample feed – salt bacon this time – and was asked how far it was from the nearest water-hole... At midday they shifted him from the shade of the tree and turned his face towards the sun and left him to think things over, bound hand and foot to quicken his mental faculties... Then they opened his mouth and stuffed it half-full of salt, and propped his teeth apart with a stick. He stood like that for three mortal hours in the sun whilst they stood revolvers in hand... Then they tied his hands behind his back, hobbled him with a robe so that he could walk but not run, covered him with their revolvers, and invited him to proceed; and he did, and at sundown they were quenching their thirst at a good soak.'*<sup>27</sup> Whittington 1990

An article in the West Australian Newspaper in 1897 about the torture of Aboriginal people in the Goldfields brought the information that was common local knowledge to the State's attention.<sup>28</sup>

*'When Western Australia was granted responsible government, the British Colonial Secretary refused to hand over control of Aboriginal affairs because of the colony's poor reputation in its treatment of Aborigines. Since colonisation had begun in 1829, some colonists and their descendants had murdered, mistreated and exploited Western Australia's Aboriginal communities for their own gain.'*<sup>29</sup> In 1890, the Imperial Government, via the Aborigines Act 1890 (Imperial), ordered the Western Australian Government to direct 1% of gross revenue, or 5 000 pounds, towards native welfare due to the gross mistreatment of Aboriginal people. Some Europeans in the Goldfields attempted to get some of the 1% directed towards the provision of water for Goldfields Aboriginal people.<sup>30</sup> In 1897, the WA Premier, John Forrest managed to repeal this Act so the revenue wouldn't be directed towards native welfare.<sup>31</sup>

---

<sup>25</sup> *Gold and Typhoid*, Vera Whittington, University of Western Australia Press 1990

<sup>26</sup> ad ibid

<sup>27</sup> ad ibid

<sup>28</sup> *The West Australian* 1895

<sup>29</sup> *Western Australia and Federation*, State Library of WA website

<sup>30</sup> *The Aborigines Board*, *The Inquirer and Commercial News*, Perth, 4 Jan 1895

<sup>31</sup> ad ibid

References and complaints about Aboriginal people in the Goldfields being ‘*an annoying burden*’<sup>32</sup> for requesting water resulted in a condenser being established for the production of water solely for Aboriginal people. Despite the establishment of the water condenser, in a letter to the Kalgoorlie Miner Newspaper in 1899 an Aboriginal man made a plea for adequate water to be provided for his people as they were dying for lack of it.<sup>33</sup>

A few compassionate members of the public sent letters to the editor of the local newspaper requesting that the Aboriginal man’s pleas be taken seriously and more water made available as, ‘*They have a good deal of trouble in getting water.*’<sup>34</sup> A handful of members of the public were greatly concerned about the lack of water for Aboriginal people and pointed out that the water supplies originally belonged to these people and had been removed from them.<sup>35</sup>

Processes were set in place to ensure Aboriginal people in Coolgardie had access to water. The condescending manner in which access to water is described shows no understanding that the water holes were Aboriginal owned in the first instance. ‘*...Mr. Martin Walsh having generously undertaken to supply the niggers with as much (water) as they require... mining registrar to take the position of local Protectors and to empower them when necessary to issue tickets which they can exchange for water... it is hoped that hereafter our sable friends will have no reason to complain of the treatment vouchsafed them by (the) white population. Water condensers will understand that there is now no need to supply aborigines with water, Mr. Walsh having totally relieved them of that annoying burden.*’<sup>36</sup> Stanner 1895

Prior to the commissioning of the pipeline from Mundaring to Kalgoorlie, a railway was built and this would be used to transport the vast quantities of materials needed for the construction. The trains were steam powered and used a large amount of water. During construction of the railway, the population at the railhead was around 1 000 men with about the same number of horses and 50 camels. Competition for existing meager water supplies was to become extreme as the railway contractor used 16 000 gallons of water per day for engines, employees and animals.<sup>37</sup>

Newly built open, shallow dams lost water at a great rate due to evaporation and were often built in ill-conceived locations due to lack of knowledge of the area.<sup>38</sup> Water famines became a reality as the average rainfall in the area was only 9.53 inches and the evaporation rate was 111.34 inches.<sup>39</sup>

---

<sup>32</sup> *The Aborigines Board*, The Inquirer and Commercial News, Perth, 4 Jan 1895

<sup>33</sup> *Plea for WA Aborigines*, Kalgoorlie Miner 14<sup>th</sup> December 1899

<sup>34</sup> *An Interesting Native*, Kalgoorlie Miner 16<sup>th</sup> December 1897

<sup>35</sup> ad ibid

<sup>36</sup> *The Aborigines Board : Mr Stanner at Coolgardie*, The Inquirer and Commercial News Friday 4<sup>th</sup> January 1895,

<sup>37</sup> *Gold and Typhoid*, Vera Whittington, University of Western Australia Press 1990 page 99

<sup>38</sup> ad ibid

<sup>39</sup> ad ibid

During the construction of the railway and then the pipeline, Aboriginal people had to compete anew with the Europeans for access to traditional water supplies and newly established tanks and dams.

Europeans did not understand the Aboriginal water management systems and therefore incidences of the destruction of waterholes occurred. The Warden of Coolgardie, J. Michael Finnerty, recorded the instance of the destruction of a gnamma hole in Coolgardie. *'After his return from one trek during the dry season he was angered by discovering that the gnamma hole – the Aboriginal rock-well after which Coolgardie had been named – only about 100 yards from his residence, which could hold 4 000 gallons of water, had been blasted in a foolish search for more water, consequently destroying the historic hole and it's usefulness.'*<sup>40</sup> Whittington 1990

The town of Coolgardie sits on land that forms a junction between two Aboriginal groups, the Ngajumaya and Kaprun people.<sup>41</sup> Intermarriage and the decimation of the Aboriginal population in the area has led to unequivocal information about ownership of the area and water sources being lost in time. Very little information about these people, their languages and culture was recorded due to the prevailing attitudes that Aboriginal people were a nuisance to be tolerated and would die out. Anthologist Daisy Bates recorded a list of Aboriginal words in the Coolgardie region in 1903 and this list has provided invaluable information about the languages.<sup>42</sup>

In 2011, the Goldfields Aboriginal Languages Project commenced the recording of the Kaalamaya language of the Kaprun people. The number of people identifying as of Kaprun descent today numbers less than 50. Examination of old records gleaned little information on the language. Working with the sole remaining Kaalamaya speaker, Brian Champion, and using the few historical documents from 1930 onwards, close to 1 000 words of the language have been assembled, providing a glimpse of the structure of the language. Many of the words are place names, predominantly water source names, which indicate that this information was of utmost importance to the people and thus had been handed down over generations as a matter of highest priority.

During the study of the language, the question was raised as to why Kaprun people were not living on their traditional land which ran roughly between the towns of Southern Cross and Coolgardie. Not a single Kaprun person lives in Southern Cross, the heartland of Kaprun country.<sup>43</sup> Instead the Traditional Owners lived in the town of Kalgoorlie and in recent years had spread further afield and interstate. Whilst combing through old records, books and newspapers it became clear that the Kaprun population was decimated during

---

<sup>40</sup> ad ibid

<sup>41</sup> *Ngalia Foundation Report*, Goldfields Aboriginal Languages Program, unpublished report, 2013

<sup>42</sup> *Coolgardie Magistrates List of Aboriginal Words*, Daisy Bates 1903

<sup>43</sup> *Personal communication Brian Champion 2012*



the period of European settlement. It appeared that a Kaprun man who was a police tracker, and his wife, were two of the very few survivors. The police tracker was referred to as 'Champ' hence the family name 'Champion' evolved. Most Kaprun people descend from this couple. It is possible that this man and his wife received some protection through his employment with the police.

*'Gaunt Aboriginal women, disheveled and accompanied by pet dogs, were a haunting presence on the streets; they were the left overs of the original residents.'*  
<sup>44</sup> Pascoe and Thomson 1989

The historic documents demonstrate significant evidence of the torture of Aboriginal people to reveal traditional water sources and of the murder and massacre of these people when they attempted to access these water supplies. Given that the Kaprun people inhabited the driest region in the Goldfields where surface water was not available and where the train line and pipeline passed directly through, it is most probable that it was these people who were subject to the brutalities of the time. *'Some time back complaints were being made about the blacks at Coolgardie being neglected, and it was alleged that many of the natives were perishing for want of water.'*<sup>45</sup> 1895

The Aboriginal desire to protect the location of water sources due to cultural obligations combined with the knowledge that very little water existed in the region would have led the Kaprun people to be very unwilling to reveal their water holes. To lose these precious water sources would mean death for their people.

*'We had dispensed with our black boy, owing to his reticence in regard to disclosing the locality of native wells and also because his relations as a matter of course insisted on accompanying us also, and as they numbered over thirty warriors, we decided it was safest to clear them out.'*<sup>46</sup> Sligo 1995

The diaries, records and documents relating to the development of the railway and the Mundaring to Kalgoorlie Pipeline, the settlements along it's length and the railhead communities developed as it was built may reveal further information as to the fate of the Kaprun and Ngajumaya people. The need for a detailed study of this historical material is pressing in order to recognize and honour the loss these people experienced as the rush for gold and the development of the railway and pipeline cut through their lands. Not only did they lose their lands, their water, culture, language and way of life, but the recognition that many people were tortured, killed or left to die of thirst in order for the Goldfields to flourish should be acknowledge and memorialised. The remaining Kaprun people and other Aboriginal groups along the pipeline need their losses acknowledged.

---

<sup>44</sup> *In Old Kalgoorlie*, Robert Pascoe and Frances Thomson, Western Australian Museum, 1989 page 198

<sup>45</sup> *Aboriginals on the Goldfields : Want of water*, The Daily News, 23<sup>rd</sup> November 1895

<sup>46</sup> *Mates and Gold : Reminiscences of the early Westralian Goldfields*, N.K. Sligo, Hesperian Press 1995, page 173

The fact that the town of Menzies was named, in honour, after a man who committed two documented cases of mass murder of Aboriginal men, women and children demonstrates that we, as a state, have still not yet come to terms with reconciling atrocities of the past.

The sites of Aboriginal massacres in the Goldfields also need to be identified and measures taken to acknowledge them and, again, memorialise the people who lost their lives in such horrendous circumstances. The recognition of such atrocities is beholding on a state that wishes to reconcile heinous acts of the past.

*‘There is no doubt we have treated the blacks very badly. We have taken their country from them and destroyed their game – thus removing their only means of living – and then expect them to change to our laws and standards of living. We have taught them all the white man’s vices and then left them to die of starvation and disease.*

*It is to our lasting shame.’<sup>47</sup> Gaston 1984*

---

<sup>47</sup> *Coolgardie Gold*, Albert Gaston, Hesperian Press, 1984 page 185