



Section A		
Institution: University of St Andrews		
Unit of Assessment: UoA22: Anthropology and Development Studies		
Title of case study: Decipherment and History: Recovering Peru's Andean Heritage		
Period when the underpinning research was undertaken: 2014 - 31 December 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed:
Sabine Hyland	Professor	01 September 2012 - present
William P Hyland	Lecturer	01 September 2013 - present
Period when the claimed impact occurred: 2015 - 31 December 2020		
Is this case study continued from a case study submitted in 2014? No		
Section B		
1. Summary of the impact		
<p>The Andean religious and cultural heritage has been understudied and its importance has been unfairly downplayed. This is for two interrelated reasons: ethnic groups in Peru, such as the Chanka Indians, lack access to their own religious history; and Andean forms of communication, 'khipus', have been disparaged as not being 'true writing', while, their sacred nature has been overlooked. Prof. Sabine Hyland's research on the religious history of the Peruvian Chanka Indians, resulting in the first historical ethnography of them, (1) helped to recover and valorise Peru's religious and cultural heritage, which led to the establishment of the Chanka Museum in 2016, and led native leaders of the Andean village of Collata to place their translation of our article in their sacred archive. Sabine and William Hyland's research on the Andean system of writing with knotted cords, 'khipus' (which includes the first partial decipherment of a khipu text) has transformed how this Andean form of communication is understood. It was thought to have been merely a memory aide; by advancing decipherment, we showed that it was actually a complex writing system. Our research (2) has been incorporated into the Peruvian school curricula, reaching over 485,000 people (Peruvian students) to date, teaching children about their ancestors' intellectual achievements. Our research has also received international media coverage, and thereby (3) increased public understanding of Andean religious and cultural achievements worldwide. The story of our khipu decipherments has been carried by major news outlets, such as <i>The Times</i>, <i>The Daily Express</i>, and <i>All About History</i> magazine. Our research was featured in <i>Discover Magazine</i> (October 2017); in a cover article in <i>New Scientist</i> (September 2018); and in an interview for the BBC World Service show, Outlook. Prof. Sabine Hyland also appeared in two Discovery Channel documentaries to discuss our khipu decipherments.</p>		
2. Underpinning research		
<p>The appreciation of the Andean cultural heritage has been hindered in part by a lack of research on regional indigenous groups, such as the Chanka of Andahuaylas, Peru, whose history until now was told through the lens of their conquerors. Thus, history stereotyped the Chanka as brutal 'savages', and they have been described pejoratively as 'bellicose warriors' in Peruvian textbooks for schoolchildren. Respect for Peru's cultural heritage has also been hindered by the lack of understanding of the nature of the Andean communication system of knotted cords</p>		

known as "khipus". Most scholars have claimed that Andean khipus were not writing, but merely simple memory aides, implying a low level of intellectual achievement for native Peruvians.

Prof. Hyland published the first history and ethnography of the Chanka Indian nation (**R1**), based on extensive archival and ethnographic research, which reveals the complexity of Chanka culture for the first time. The research revealed the sadistic rule of one Spanish priest whose dehumanising legacy had repercussions on the native political and social structures well into the 18th century (**R1**). In regard to the decipherment of the khipu writing system, Hyland's research has made, for the first time in 100 years, a series of advances in khipu decipherment: **(1)** deciphered the meaning of knot direction in khipus (**R2**); **(2)** deciphered the significance of ply direction in khipus (**R2**); **(3)** deciphered the two most common colour patterns in khipus (**R3**); **(4)** discovered and partially deciphered the first phonetic Andean khipus ever known, demonstrating that the colourful cords represented syllables and could even tell a story (**R4** and **R5**); and **(5)** analysed the ways in which khipus are sacred texts (**R6**).

The research has contributed to the recovery of Peru's cultural heritage in two ways: first, by uncovering the history, religion and culture of the Chanka people, and second by advancing the decipherment of khipu writing, disproving the dominant view that khipus were merely memory aides, and demonstrating that Peruvian Indians were capable of developing a writing system.

3. References to the research (indicative maximum of six references)

The research listed below was supported by peer-reviewed grants and published in peer-reviewed and highly regarded academic journals and press. These publications are representative of a larger body of work by the research group of Sabine Hyland and William P. Hyland.

R1. Hyland, Sabine. 2016. *The Chankas and the Priest: A Tale of Murder and Exile in Highland Peru*. College Station: Pennsylvania State University Press. ISBN: [9780271071220](https://doi.org/10.1215/00141801-2016-001)

R2. Hyland, Sabine. 2014. "Ply, Markedness and Redundancy: New Evidence for How Andean Khipus Encoded Information". *American Anthropologist*. Vol. 116, no. 3, 643-648. DOI: [10.1111/aman.12120](https://doi.org/10.1111/aman.12120).

R3. Hyland, Sabine. 2016. "How Khipus Indicated Labour Contributions in an Andean Village: An Explanation of Seriation, Colour Banding, and Ethnecategories", *Journal of Material Culture* 21(4), 490-509. DOI: [10.1177/1359183516662677](https://doi.org/10.1177/1359183516662677).

R4. Hyland, Sabine, 2020. "[Khipus en el Perú Colonial y Republicano](https://doi.org/10.1111/aman.12120)" ("Khipus in Colonial and Republican Peru"), In: *Khipus*, edited by Cecilia Pardo Grau and Gary Urton, Lima: Museo de Arte de Lima Press, pp. 165-171, <https://docplayer.es/198236586-Khipus-en-el-peru-colonial-y-republicano.html>.

R5. Hyland, Sabine. 2017. "Writing with Twisted Cords: The Inscriptive Capacity of Andean Khipu Texts", *Current Anthropology*, 58 (3). DOI: [10.1086/691682](https://doi.org/10.1086/691682).

R6. Hyland, Sabine. 2020. "Khipu Historiography", *L'Encyclopédie des historiographies. Sources et genres. Afriques, Amériques, Asies, Volume 1*. edited by P. Ragon, N. Kouamé, E. Meyer, A. Viguier. Paris: Inalco Press. pp. 964-972, <https://books.openedition.org/pressesinalco/26308>.

4. Details of the impact

The cultural achievements of the native peoples of the Andes have often been undervalued and denigrated. Our research addresses this issue in two ways and has: (1) helped to recover and valorise Peru's religious and cultural heritage; (2) led to our research being incorporated into the Peruvian educational curriculum; and (3) increased public understanding of Andean religious and cultural achievements worldwide.

(1) Our research has helped to recover and valorise Peru's religious & cultural heritage:

Prof. Sabine Hyland's book on the Chanka nation (**R1**) has given Chanka Indians a better understanding of their religious and cultural heritage, a heritage which typically has been disparaged in Peruvian history textbooks. The Andahuaylas Minister of Culture and Commerce wrote: *'the publication of "The Chankas and the Priest" represents a watershed moment for us in*

Andahuaylas [home of the Chanka nation]... For the first time we see our Chanka ancestors humanised; in their actions, we can see ourselves. No longer just "enemies of the Inka" or "bellicose warriors", Professor Hyland's research and publications have given us a fuller sense of who we are as a people, and the importance of valorizing, perserving and celebrating our cultural heritage' (S1).

Our research on the Chanka Indian nation (R1) resulted in the establishment, in the city of Andahuaylas, Peru, in 2016, of the [Chanka Museum](#). The museum features Chanka history displays based on our research where local people learn about their history and spiritual heritage (S1). For bringing the voice of the ancient Chanka, their 'own' history, to their present-day ancestors, the Chankas have made Prof. Sabine Hyland 'an honorary Andahuaylina who contributes to the cultural, academic and economic life of this region in significant and long-lasting ways' (S1).

Recognising that our khipu research demonstrates the importance of their cultural heritage, the native leaders of the Andean village of Collata have placed a translation of the *Current Anthropology* article (R5) in their sacred archive. This archive consists of a wooden chest that also contains the khipus and colonial documents that serve as the basis of their religious and ceremonial life. The archive is hidden in an underground chamber of the church, indicating the sacred nature of these khipus (S2). Village authorities now include a formal consultation of the article in the annual ceremony to install village officials responsible for local religious festivals. Villagers believe that the khipus express the concerns of the mountain deities; when the council of elders decided to show the khipus to us, the first outsiders ever to see them, the mountains signalled their approval by the fact that vicuñas (one of two wild South American camelids which live in the high alpine areas of the Andes) appeared in the surrounding peaks for the first time in decades. Our partial decipherment of the khipus is thought to please their ancestors and bring prosperity to the community (R4, R5, and R6).

2) Peruvian educational curriculum changed to improve religious and cultural awareness:

This project's discoveries have been included in Peruvian educational curriculums at the 2i) national (the Peruvian Ministry of Education); 2ii) regional (Cuzco regional government); and 2iii) local (Collata village school) levels.

2i) After seeing the international media coverage on our khipu discoveries, the Peruvian Ministry of Education asked Prof. Hyland in 2017 to fact-check and provide photos for an online classroom lesson about our research that the Ministry prepared for school teachers throughout Peru. Titled "Our khipus astonish the world" (<http://www.perueduca.pe/estudiantes/especial-del-mes/nuestros-quipus-siguen-asombrando-al-mundo>), this lesson has been accessed by Peruvian school teachers 17,444 times to date, reaching over 485,000 people (Peruvian students) and thus approximately 20% of the total number of secondary school children in Peru (25 August 2020; the website maintains a counter that records only when teachers access the site). Teachers share comments on the site. Here are four indicative examples: "*How important this article about khipus [is]; as teachers we must know more about our ancestors so that we can teach the next generation about our history so that it is never forgotten*" (28/03/18); and "*Interesting lesson! What a marvellous legacy our ancestors have left to us... this is a very beautiful subject to discuss with our students*" (27/03/18). "*It will be important to share [this lesson] with our students... so that they value our roots*" (08/10/19); "*We as teachers need to know more about this topic to teach our students and to call attention to the lives of our ancestors, so that when we make comparisons with other societies, we are not left behind*" (13/10/19); and "*A great contribution to discoveries about our ancestors, and a great legacy for future generations*" (18/01/19) (S3).

2ii) In 2015, the Cuzco Province's Ministry of Culture learned about Hyland's research from a National Geographic documentary about her (Decoding the Incas) that aired in Peru in Spanish. They then asked Hyland to write an article about her khipu discoveries. The Cuzco regional government (population 2,000,000 people) prepared and printed this publication at their expense about our khipu discoveries for all the provincial schools and libraries as a resource for teachers and students (15,000 copies). The Ministry of Culture in Cusco wrote, "[your research] has

greatly expanded our understanding of the value of the cultural heritage of the Andean people" (S4).

2iii) When community leaders in the Andean village of Collata saw Peruvian newspaper stories about our research on their khipus, they asked Prof Hyland for a copy of the Current Anthropology article (R5) which triggered the media interest. She provided the article, which they translated and placed in their sacred archive, and include in the curriculum of the local school. As a Collata village leader wrote, "We want our children to understand the value of their cultural heritage" and therefore "they need to know about your discoveries about our past" (S5).

3) Increased international public understanding of Andean cultural achievements:

Until Hyland's khipu research, it was thought that Andean Indians had not possessed writing; our research has demonstrated that khipus were a complex, often phonetic form of writing. The editors at *Current Anthropology* coordinated with National Geographic's publicity department to distribute international press releases at the time that (R5) was published. The story was picked up by different news outlets, many of which requested interviews with Prof. Hyland for both print media and radio.

The story of the discovery and partial decipherment of the first phonetic khipu ever found throughout the world (R5) made international news being carried by 11 major news outlets between 2017 and 2019, including *The Times* (circulation 437,352) and the *Daily Express* on 21 April 2017 (circulation 397,236) (S6); and a featured interview in *All About History* magazine, October 2019 (S7). The story was carried by media in the US, UK, France, Italy, China, Japan, Poland, and Peru; in a feature article in the *Discover Magazine*, October 2017 (circulation 582,276) (S8); in a cover article in *New Scientist*, September 2018 (circulation 124,623) (S9); and in an interview for the BBC World Service show, *Outlook* ('Deciphering the messages left by the Incas'), August 2018. Prof. Hyland also appeared in two Discovery Channel documentaries, *Unearthed: Machu Picchu* (aired July 2017), and *Unearthed: Inca Cusco* (aired October 2018), to discuss the research. In the first *Unearthed* documentary, Prof. Hyland analysed a khipu in Oxford's Pitt Rivers Museum and in the second she disseminated her research on Catholic missions in Peru. According to Altmetric, the *Current Anthropology* article (R5) had an attention score of 92% and was in the top 5% of all research outputs scored by Altmetric (S10).

5. Sources to corroborate the impact (indicative maximum of ten references)

S1. Letter from the Director of Culture and Commerce, Andahuaylas, Chanka Nation (2016).

S2. Facebook message from the Secretary of the Association of Collatinos in Lima (12 June, 2017).

S3. Peruvian Ministry of Education lesson plan, "Our Khipus Astonish the World" with 184 comments by school teachers on teaching their students about our khipu discoveries.

S4. Letter from the Ministry of Culture, Cusco, Peru (2015).

S5. Letter from the indigenous authorities of San Juan de Collata, Peru (2015).

S6. *The Times* (Scotland) news article about our khipu discoveries, "Knotty Problem of Inca Writing Unpicked at Last", by Jeremy Watson, and the *Daily Express* news article about our khipu discoveries, "This may be key to secret Inca writing", by David Scott (21 April 2017) with circulation numbers.

S7. *All About History* magazine interview "Q&A with Professor Sabine Hyland: Investigating How the Incas Communicated Through Knotted Cords" by Jessica Leggett (October 2019).

S8. News story in popular science magazine, *Discover Magazine*, "Unravelling a Secret" by Bridget Alex (October 2017).

S9. *New Scientist Magazine*, "The Inca Code: We thought they left no writing. We were wrong" by Daniel Cossins (29 September 2018) and circulation numbers.

S10. PDF of Altmetric analysis for the body of research (22 August 2019).