

Electronic Supplementary Material

Marius Mercier

2023-10-31

Contents

1. Ethnographic Review	1
2. Main Analysis	8
Study 1	8
Study 2	8
Study 3	8
Study 4	8
Study 5	8
Meta-Analysis	8

The Electronic Supplementary Material include more information on the Ethnographical Review (section 1), provide pre-registered analysis not presented in the paper for concision (section 2), and provide all the regression table of the analysis presented in the paper both with and without controls (section 3). Finally, we include the meta-analysis and the plot (section 4). This pdf file is generated using the RMarkdown file “ESM.Rmd”. All scripts used for the data processing and statistical analysis can be found following this Github link: https://github.com/mariusmercier/paper_insight_culture. Simply copy the github and run the Rmd file. A permanent archive is also available at the following OSF project: <https://osf.io/7qwt2/>.

1. Ethnographic Review

Nowadays, riddles have lost their once prominent place in the playground to other more attractive cultural products. Nevertheless, we still have the trace of what the children’s folklore looked like in the 1960s thanks to the work of the Opie couple. As it is possible that Opie & Opie has put forward an idiosyncratic cultural practice, we conducted a search in the Human Relations Area Files anthropological database (eHRAF: World Cultures database) to see if there were any traces of riddles outside of the Anglo-Saxon culture. We searched for the words “riddle”, “enigma”, “puzzle” and “conundrum” in July 2022. Unfortunately, it is common for researchers to refer to something they do not understand as a riddle, a puzzle or an enigma which makes it difficult to detect ethnographic reports on these cultural practices. Therefore, we restricted our search to the paragraphs already coded in the “Game” category. This research allowed us to identify 43 cultures where the practice of riddles is common.

The majority of the identified cultural groups are in Africa (N = 16) and in Asia (N = 13). For instance, the Maasai people have a riddle saying “I have two skins, one to lie on and the other to cover myself with. What are they?” (Hollis, 1905). The answer “the bare ground and the sky” showed a typical reconstruction of the mental representation of “skin” similar to what we can find in insight problems. Riddles were found in

other continents and areas such as Europe (N = 2), Middle East (N = 1), Middle America & the Caribbean (N = 5), North America (N = 4), South America (N = 1) and Oceania (N = 1).

To control for the possibility that this cultural practice was culturally transmitted from one or several common sources, we make use of the Probability Sample Files (PSF). The PSF is a subset of 60 unrelated culture, largely preindustrial, that meet certain data quality controls. One culture is randomly chosen from each culture area. (For more information see: <https://hraf.yale.edu/resources/reference/probability-sample-files-psf/>). 18 out of 60 cultures had records of riddles.

Table 1: HRAF survey of ethnographics records of culture.

Continent	References	Culture	Example.of.Riddle	PSF
Africa	Levine, D. N. (1965). Wax & gold: tradition and innovation in Ethiopian culture. University of Chicago Press.	Amhara		1
	Hollis Sir, A. C., & Eliot. (1905). The Masai: their language and folklore. The Clarendon Press.	Maasai	I have two skins, one to lie on and the other to cover myself with. What are they? The bare ground and the sky.	1
	Maxwell, Kevin B. (Kevin Burns). 1983. "Bemba Myth and Ritual: The Impact of Literacy on an Oral Culture." In American University Studies, vol. 2:xxiii, 197. New York: P. Lang.	Bemba	A little basket which is never filled ?! The ear [the ear represents the memory in the Bemba culture]	1
	Yankah, K. (1989). The proverb in the context of Akan rhetoric: a theory of proverb praxis. In Sprichwörterforschung (p. 313). P. Lang.	Akan		1
	Calame-Griaule, G. (1986). Words and the Dogon world. Institute for the Study of Human Issues.	Dogon		1
	Peshkin, A. (1972). Kanuri schoolchildren; education and social mobilization in Nigeria. In Case studies in education and culture (pp. xviii, 156). Holt, Rinehart and Winston, Inc.	Kanuri		1

Table 1: HRAF survey of ethnographics records of culture. (*continued*)

Continent	References	Culture	Example.of.Riddle	PSF
	Akiga, East, R., & Cultures, I. I. O. A. L. A. (1939). Akiga's story: the Tiv tribe as seen by one of its members. Oxford University Press.	Tiv	The elephant fell on the rock, but they did not finish cutting up the meat. A: 'Beniseed.' If grains of beniseed fall on rock or soil, can you ever pick them all up?"	1
	Pagés, G., & Scholl, B. (1933). A Hamitic kingdom in the center of Africa: in Ruanda on the shores of Lake Kivu (Belgian Congo). In Mémoires: Vol. Vol. 1 (p. HRAF ms: v, 293 [original: iv, 704 , 29 plates]). Libraire Falk fils, Georges van Campenhout, Successeur.	Rwandans	Question: "What is the most improper thing, that causes the greatest embarrassment and constraint?" Answer: "A fly drowned in milk or sitting on the king's forehead."	0
	Raum, O. F. (1940). Chaga childhood: a description of indigenous education in an East African tribe. Oxford University Press for the International Institute of African Languages and Cultures.	Chagga		0
	Huffman, R., & Westermann, D. (1931). Nuer customs and folklore. International Institute of African Language and Culture.	Nuer		0
	Smith, Edwin William, and Dale, Andrew Murray, d. 1919. 1920. The Ila-Speaking Peoples of Northern Rhodesia: Vol. 2. London: MacMillan and Co.	Ila	Kafua ka Ntite kwina owatakasola. There is nobody who has not tasted the little bone of Ntite. Answer: Ndukolo—"the breast." There is a play on the words ka Ntite ("of a little bird") and Katiti ("the dugs").	0

Table 1: HRAF survey of ethnographics records of culture. (*continued*)

Continent	References	Culture	Example.of.Riddle	PSF
	Schultze, L. S., Knight, E. C., & Ziolkowski, T. (1907). In Namaland and the Kalahari. Gustav Fischer.	Khoi	What do you see (mũ), although (xabe) it may (ga, potential) be dark (!kxaë), it may be far (!nũ) and it may be near (/gũ). (tsĩna, neut. pl. summarizing all the cases once again). — Fire	0
	Gelfand, M. (1979). Growing up in Shona society: from birth to marriage. Mambo Press.	Shona	This thing is invisible, it cannot be heard or smelt, it is behind the stars and below the mountains, in the valleys and kills people - The Wind	0
	Junod, H. A. (1927). The life of a South African tribe: vol. 2. Macmillan and Co., Limited.	Tsonga	What is the thing up the trunk of which one cannot climb? It is the juncus.	0
	Callaway, H. (1868). Nursery tales, traditions, and histories of the Zulus, in their own words, with a translation into English, and notes. John A. Blair ; Davis and Sons ; Trübner and Co.	Zulu		0
	Gay, John, and Michael Cole. 1967. The New Mathematics and an Old Culture: A Study of Learning among the Kpelle of Liberia. Holt, Rinehart and Winston.	Kpelle	It is the story of a man with a leopard, a goat, and a bunch of cassava leaves, which he has to take across a river. Only two things can cross at the same time. How then is the man to get them across the river, without the leopard eating the goat while he is not watched, or the goat eating the cassava leaves?	0

Table 1: HRAF survey of ethnographics records of culture. (*continued*)

Continent	References	Culture	Example.of.Riddle	PSF
Asia	Bogoraz-Tan, W., Vladimir Germanovich (Bogoras. (1910). Chukchee mythology: Chukchee texts [part 1], Chukchee tales [part 2]. In Memoirs: Vol. vol. XII (p. 197 [HRAF pagination – incomplete]). E. J. Brill, Ltd. ; G. E. Stechert and Co.	Chuckchee	I have four holes and only one road. –A wooden house	1
	Sieroszewski, W. (1993). The Yakut: an experiment in ethnographic research. Assotsiatsiia “Rossiiskaia polit. entsiklopediia.”	Yakut	They say there is a grey bull over the yurt – the sun	1
	Sangma, V. S. B. (1995). Garo folk literature. In hill societies, their modernisation : a study of north east with special reference to garo hills (pp. 156–164). Omsons Publications.	Garo	It has only one head but hundreds of eyes.What is it?Ans. — A pineapple.	1
	Archer, W. G. (William George). 1974. The Hill of Flutes: Life, Love, and Poetry in Tribal India : A Portrait of the Santals. Pittsburgh: University of Pittsburgh Press.	Santal		1
	Anderson, W. W. (1983). Children’s play and games in rural Thailand: a study in enculturation and socialization. University Microfilms.	Central Thai	What is it? Black as a bear; the more it’s beaten, the more it bites. Black as a tick; the more it bites, the more it is beaten A: a mosquito	1
	Adriani, N., & Kruijt, A. C. (1951). The Bare’e-speaking Toradja of central Celebes (the East Toradja): third volume. In Verhandelingen (Issue no. 1, p. HRAF MS: vii, 651 [original: viii, 484]). Noord-Hollandsche Uitgevers Maatschappij.	Eastern Toraja		1
	Foning, A. R. (1987). Lepcha, my vanishing tribe. Sterling Publishers.	Lepcha		0
	Naik, T. B. T. B. (1956). The Bhils: a study. Bharatiya Adimjati Sevak Sangh.	Bhil		0

Table 1: HRAF survey of ethnographics records of culture. (*continued*)

Continent	References	Culture	Example.of.Riddle	PSF
	Elwin, V. (1947). The Muria and their ghotul. Oxford University Press.	Gond		0
	Rivers, W. H. R. (William H. R. (1906). The Todas. Macmillan.	Toda		0
	Koentjaraningrat. (1985). Javanese culture. Oxford University Press.	Javanese		0
	Sather, C. (1975). Literary form in Bajau Laut riddles. Sarawak Museum Journal, Vol. 23(no. 44), 187–206.	Sama-Bajau	It looks the same but tastes different	0
Europe	Huard, P., & Durand, M. M. (ca. 1990). Viet-Nam, civilization and culture. Imprimerie Nationale ; Ecole francaise d’Extrême-Orient.	Vietnamese	White feet, black body, bearing a cap in the shape of a lotus flower, and asisting the Supreme Emperor.- “An incense stick	0
	Sokolov, I. M. (IUriĭ M., & Smith, C. R. (1950). Russian folklore. In American Council of Learned Societies. Russian Translation Project (pp. viii, 760). The MacMillan Company.	Russians	She is red [pretty], but she is not a maid; she is green, but she is not a grove of trees” (a carrot);	0
Middle America & the Caribbean	Itkonen, T. I., & Minn, E. K. (ca. 1948). The Lapps in Finland up to 1945. Vol. 1. Werner Söderström Osakeyhtiö.	Saami	Higher than the mountains, lower than the twigs. The path	1
	Beckwith, M. W. (1929). Black roadways: a study of Jamaican folk life. The University of North Carolina Press.	Jamaicans	“Send boy to fetch doctor, doctor come before boy,” is explained as a boy, sent up a tree after a water cocoanut, who throws down the cocoanut before descending himself	0
	Seda Bonilla, E. (1973). Social change and personality in a Puerto Rican agrarian reform community. Northwestern University Press.	Puerto Ricans		0

Table 1: HRAF survey of ethnographics records of culture. (*continued*)

Continent	References	Culture	Example.of.Riddle	PSF
	Taylor, D. M. (1951). The Black Carib of British Honduras. In Publication in anthropology (p. 185). Wenner-Gren Foundation for Anthropological Research, Inc.	Garifuna	Q: A child that commands its mother. The rudder on a canoe	0
	Nordenskiöld, E., érez Kantule, R., & Wassén, H. (1938). An historical and ethnological survey of the Cuna Indians. In Comparative ethnographical studies: Vol. vol. 10 (pp. xxvii, 686 , plates). Göteborg Museum.	Kuna		1
	Burns, A. F. (Allan F. (1983). An epoch of miracles: oral literature of the Yucatec Maya. In The Texas Pan American series (pp. xiv, 266). University of Texas Press.	Maya	Goes in hungry, comes out full. A: A bucket used to get water from a well	0
Middle East	Friedl, E. (1997). Children of Deh Koh: young life in an Iranian village. Syracuse University Press.	Lur	“A smooth, flat plain full of round rocks” A: bread cloth with balls of dough	0
North America	Kinietz, W. V. (William V. (1940). Huron. In The Indians of the western Great Lakes 1615-1760 (Issue no. 10, pp. iv – v, 1–160, 330–338). University of Michigan Press.	Huron/Wendat		0
	Tooker, E. (1970). The Iroquois ceremonial of Midwinter. Syracuse University Press.	Iroquois		1
	Kan, S. (1989). Symbolic immortality: the Tlingit potlatch of the nineteenth century. In Smithsonian series in ethnographic inquiry (pp. xi, 390). Smithsonian Institution Press.	Tlingit	Where has this raven been last year and what did he eat?” The correct answer would be, “This raven has been to Chilkat, where he ate lots of salmon skins.”	1

Table 1: HRAF survey of ethnographics records of culture. (*continued*)

Continent	References	Culture	Example.of.Riddle	PSF
Oceania	Johnson, G. B. (1930). Folk culture on St. Helena Island, South Carolina. University of North Carolina Press.	Sea Islanders	some are similar to African discussion riddles, some are similar to the classic english question	0
	Beckwith, M. W., & Loumala, K. (1970). Hawaiian mythology. University of Hawaii Press.	Hawaiians		0
South America	Price, R., & Price, S. (1991). Two evenings in Saramaka. University of Chicago Press.	Saramaka		1

2. Main Analysis

Study 1

Study 2

Study 3

Study 4

Study 5

Meta-Analysis