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### ► To cite this version:

Martine Vanhove, Mohamed-Tahir Hamid Ahmed. Heart metaphors in Beja. *Language in Africa*, 2022, 3 (2), pp.368-388. 10.37892/2686-8946-2022-3-2-368-388 . halshs-03764671

**HAL Id: halshs-03764671**

**<https://shs.hal.science/halshs-03764671>**

Submitted on 7 Sep 2022

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## HEART METAPHORS IN BEJA

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**Abstract:** Cross-linguistically, BODY PARTS have been claimed to be universally recruited as a source domain for conceptual metaphors. This article presents a preliminary corpus-based study of the metaphorical constructions in which the noun *ginʔa* ‘heart’ is used in Beja, the sole language of the North-Cushitic branch (Afroasiatic). The semantic and syntactic particularities of the Beja metaphors are discussed within the background of the cognitive theory of embodiment and in comparison with other languages. It is shown that Beja makes use of the widespread metonymy HEART FOR PERSON, and several well-known metaphors, but displays a number of peculiarities in the choice of the collocations with ‘heart’, including in relation with the target semantic domains of the metaphors. Beja heart-based metaphors illustrate one more case of a language where this organ is conceived as the locus for both COGNITION and EMOTION, a double conception which seems to be rare among the languages of Africa.

**Key words:** Cushitic, Beja, semantics, syntax, conceptual domains, cognition, emotion, metaphor, body parts, embodiment, culture

### 1. Introduction

BODY PARTS have been claimed to be universally recruited as a source domain for conceptual metaphors, in particular for abstract concepts such as EMOTION and COGNITION (e.g. Lakoff 1987, 1993; Gibbs 1994; Yu 1998; Lakoff & Johnson 1999; Kövecses 2000).<sup>1</sup> Within the

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<sup>1</sup> For the counter-example of Gbaya (Ubangian), which goes from an abstract meaning to several concrete meanings, see Roulon-Doko (2021). For a critic of embodied metaphors viewed as uniquely rooted in synchrony see e.g. Wierzbicka (1999), Geeraert & Gevaert (2008), and Ponsonnet (2014).

cognitive theory of *embodiment* that accounts for the pervasive relationship between body and mind, they are considered as “primary metaphors”, because they are directly linked to several universal aspects of the daily life of human beings (e.g. Lakoff & Johnson 1999; Gibbs *et al.* 2004; Grady 2005; Gibbs 2006). However, even if the association between BODY PARTS and EMOTION and/or COGNITION is probably universal, “[d]ifferent aspects of bodily experience may be used selectively to result in metaphorical variation” (Wnuk & Ito 2021: 196). Moreover, culture also plays an essential role in the selection of BODY PARTS terms and of the domains onto which they are mapped (e.g. Geeraerts & Grondelaers 1995; Holland & Quinn 1987; Yu 2003, 2007; Kövecses 2005). Cultural variations in metaphorical extensions of BODY PARTS have indeed been observed in many languages and cultures around the world (e.g. Goddard 2003; Kövecses 2005; Ibarretxe-Antuñano 2008; Yu 2008; Sharifian *et al.* 2008; Ponsonnet 2014; Wnuk & Ito 2021), among them African ones, e.g. in Sar (Central Sudanic, Fédry 1976), Zulu (Bantu, Taylor & Mbense 1998), Dholuo (Western Nilotic, Reh 1998), and several other Nilotic and Bantu languages (Dimmendaal 2002), Ewe (Kwa, Ameka 2002), or South Mande languages (Perekhval'skaya 2008).

This paper presents a preliminary corpus-based study of the metaphorical constructions in which the noun *ginʔa*, which refers to the ‘heart’ organ (1), is used in Beja.

- (1) *u:n*                      *u:=gnʔa*                      *dha:j* *i-qhan=ho:b*  
 PROX.SG.M.NOM    DEF.SG.M.NOM=heart    DIR    3SG.M-live\PFV=when  
*o:=gnʔa*                      *ʔa:m-ta:-j*                      *ti-dʔi*  
 DEF.SG.M.ACC=heart    take\_mouthful-PFV.3SG.F-L    3SG.F-do\PFV  
 ‘When it (Vixen) found the heart alive (i.e. still beating; lit. this heart was alive towards it), it ate it up.’ (BEJ\_MV\_NARR\_58\_DonkeyVixenHyena\_SP1\_63-65)<sup>2</sup>

<sup>2</sup> Examples extracted from the first author’s corpus are referred to by text number (58), genre (NARR, CONV, POEM or JOKE), short title (Donkey

In its metaphorical uses, *ginʔa* ‘heart’ is mapped onto two conceptual domains: COGNITION and EMOTION. The semantic and syntactic particularities of the Beja metaphors will be presented in turn within the background of the cognitive theory of embodiment mentioned above. After a brief presentation of Beja and the data in §2, §3 is dedicated to metaphors in the cognitive domain, §4 to emotions. §5 contains a summary of the findings and concluding remarks for further research.

## 2. Beja and the data

Beja, locally named *biɖawije:t*, is the sole language of the North-Cushitic branch of the Afroasiatic phylum. It is spoken in the northernmost part of the Cushitic-speaking area, mainly in the Red Sea and Kassala States in eastern Sudan, in the dry lands between the Red Sea and the Atbara River. The total number of speakers in this country is estimated at approximately 2,000,000 speakers, all Muslims. Until the first half of the 20<sup>th</sup> century, their main occupations were camel trading and pastoralism; only the latter survives today to a lesser extent. The Beja settle more and more in villages and cities like Port-Soudan and Kassala, even if they often keep moving from one place to another.

In Sudan, bilingualism with Sudanese Arabic is widespread and expanding, but discredited for women who lead a cloistered life. Beja speakers have a strong awareness of a hierarchy of speech related to rules of honour, politeness, and taboos, correlated to a strong inclination towards allusive speech, including metaphorical expressions.

Beja has a rich and complex morphology, flexional and derivational, both in the nominal and verbal domains. It is a marked nominative language with four nominal cases, two for the verb core arguments, nominative and accusative, and two for noun phrases, genitive and vocative. Pronouns have two additional cases, dative and ablative/locative. Syntactically, Beja is predominantly head-final; the canonical

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VixenHyena), the speaker number (SP1) if several, and the number of the intonation unit(s) (63-65). BEJ is short for Beja, and MV for Martine Vanhove.

constituent order is (X)(S)(O)V, and dependent clause — matrix clause. However, constituent order is not particularly rigid and may vary for pragmatic reasons (for details see Vanhove 2017).

The data used for this paper was recorded by the first author in eastern Sudan over a period of ten years, between 2001 and 2011. It mainly consists of 178 traditional narratives, anecdotes and personal accounts, 33 jokes, sixteen procedural texts, fifteen poems, four interviews, two pear stories (Chafe 1980), and one conversation, for a total duration of almost ten hours.<sup>3</sup> It is complemented by data extracted from our Beja-English-French dictionary (Vanhove & Hamid Ahmed in prep.). None of them was aimed to collect heart-based metaphors, but they nevertheless surfaced sporadically in all genres, but the procedural texts and pear stories. This means of course that this preliminary study can only provide a partial view of ‘heart’ metaphors in Beja, and that, at this stage of the research, it is not possible to weigh their relative conceptual and cultural salience compared to other body-part metaphors.

### 3. Heart metaphors of cognition

#### 3.1. ‘Think’

Beja is rich in verbs expressing the concept of THINK, with no less than six synonyms at the base form: *fakkar*, *gijis*, *sajjas*, *hi:s*, *sajj?*, and *j?*. The first three ones are loans from Sudanese Arabic. All native verbs are polysemous, *hi:s* with ‘to believe’, *sajjas* and *sajj?* with ‘to guess’, and *j?* with ‘to remember’. In addition to these lexemes, two heart metaphors occurred in the data. The first one illustrates the widely cross-linguistically attested metonymy HEART FOR PERSON, and the metaphor THINKING IS MOTION. In this construction *gin?a* is the agentive subject of the verb *far* ‘to jump’, which has an oblique complement marked by the directional postposition =*d* / =*da* ‘towards’. JUMPING IN

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<sup>3</sup> Part of the data is available online at <https://corporan.huma-num.fr/Archives/corpus.php>.

association with the heart is also found in ancient Egyptian, but with opposite metaphorical meanings, namely restlessness and lack of commitment, both related to the domain of emotions. They denote “an impulsive and unreasonable attitude, based on emotional impulse instead of rationality.” (Chantrain forth.).<sup>4</sup>

- (2) *fa:wi kara:j i=mi:-kti=je:=d*  
 again hyena DEF.M=N.AC-become=GEN.PL=DIR  
*i=gin?=i far-a=ji*  
 DEF.M=heart=POSS.1SG.NOM jump-CVB.MNR=POSS.1SG.ACC  
*ki=i-ki*  
 NEG.IPFV=3SG.M-become\PFV  
 ‘I was not thinking of becoming a hyena anymore (lit. Again my heart was not jumping towards becoming a hyena).’ (BEJ\_MV\_NARR\_43\_hyena\_man\_123-126)
- (3) *winne:t i=ndiwa=hi=d i=gin?=u:*  
 very DEF.M=family=POSS.3=DIR DEF.M=heart=POSS.3SG.NOM  
*far-i:ni*  
 jump-IPFV.3SG.M  
 ‘He thinks about his family a lot (lit. His heart jumps to his family a lot).’ (BEJ\_MV\_NARR\_140\_chiefPrison\_113)

In the second metaphor, which also belongs to the metonymic type HEART FOR PERSON, it is a perception verb of vision that is used, *law* ‘to appear’. So THINKING is conceived as a PHYSICAL EXPERIENCE, precisely THINKING IS VISUAL PERCEPTION. Contrary to the first metaphor, the heart is not the syntactic subject, but the oblique directional complement of the perception verb, assuming the semantic role of an experiencer. In (4), the heart metaphor occurs in a complement clause of the speech verb *hadi:d* ‘to talk’, whose direct object is the feminine dummy noun

<sup>4</sup> JUMPING is also metaphorically used in e.g. Chinese and English, but not in association with the heart, to express positive emotions of happiness, not cognitive meanings (Yu 1995: 74, 78).

*na* ‘thing’, itself the head of a relative clause which licenses the feminine agreement on the verb *law*.<sup>5</sup>

- (4) *tak=ka      əəə   t#   i=ginʔ=ji=da*  
 man=DISTR   er   FS   DEF.M=heart=POSS.3SG.GEN=DIR  
*law-tini:=t                                  to:=na                                  hadi:d-i:ni*  
 appear-IPFV.3SG.F=REL.F   DEF.SG.F.ACC=thing   talk-IPFV.3SG.M  
 ‘Each man, er, says what he thinks (lit. Each man talks the thing  
 that is appearing to his heart).’ (BEJ\_MV\_CONV\_01\_RICH\_  
 SP2\_331-332)

### 3.2. ‘Remember’

Beja has no monosemous verb for the concept of REMEMBER, which is expressed with the polysemous verb mentioned in 3.1., *ʃʔ* ‘to think; to remember.’ Two heart-based metaphors are also used, which both belong to the metonymic type HEART FOR PERSON.

The first one is the same metaphorical construction as the above first THINK metaphor with *ginʔa* ‘heart’ as the subject of the verb *far* ‘to jump’. Example (5) shows that the use of a possessive pronoun on *ginʔa* is not compulsory.<sup>6</sup>

- (5) *kara:j-i=d                                  u:=ginʔa                                  far-i=ho:b*  
 hyena-GEN=DIR                                  DEF.SG.M.NOM=heart                                  jump-AOR.3SG.M=when  
*to:t                                  ti=bire:=t=i:b                                  gam-i:ni*  
 PROX.SG.F.ACC                                  DEF.F=skey=INDF.F=LOC.SG                                  scream-IPFV.3SG.M  
 ‘When he remembers the hyena (lit. The heart was jumping towards  
 the hyena), he screams up to the sky.’ (BEJ\_MV\_NARR\_40\_camel\_  
 hyena\_060-062)

<sup>5</sup> For complement clauses based on relative clauses with the dummy head noun, see Vanhove (2017: 176).

<sup>6</sup> Both the THINK and REMEMBER heart-based metaphors can be used with or without a possessive pronoun.

The second heart metaphor for REMEMBER is a spatial one. It involves the verb *sirir* ‘to lengthen’, which in this case can only occur in a light verb construction with the verb *di* ‘to say’. *gin?a* ‘heart’ is the subject, but the true actor of the remembering event is represented as the direct object, a bound object pronoun in (6). The conceptual metaphor could thus read as follows: REMEMBERING IS LENGTHENING ONE’S HEART TOWARDS AN ENTITY.

- (6) *ga:l do:r i=kara:j=d u:=gn?a sirir*  
 one time DEF.SG.M=hyena=DIR DEF.SG.M.NOM=heart lengthen  
*i:-d=he:b*  
 3SG.M-say\AOR=OBJ.1SG  
 ‘All of a sudden I remembered the hyena (lit. The heart lengthened me).’ (Dictionary)

### 3.3. ‘Forget’

The lexical antonym of ‘to remember’ is the verb *ba:qin* ‘to forget’.

The FORGET concept can be expressed with the well-known primary conceptual metaphor of the type HEART IS A CONTAINER. It also illustrates the motion metaphor: FORGETTING IS GOING OUT OF THE HEART. It is built with the intransitive middle verb *fir?* ‘to get out’, what is forgotten is the syntactic subject, and the ‘heart’ is an oblique experiencer, marked by the possessive bound pronoun in the ablative case.

- (7) *t=habaj ibitke:=ka i=gin?=isi*  
 DEF.F=poeM in\_the\_middle=DISTR DEF.M=heart=POSS.1SG.ABL  
*fir?a-ti ti-ni:n*  
 get\_out\MID-CVB.GNRL 3SG.F-take\IPFV<sup>7</sup>  
 ‘Each time in the middle (of my talk), I forget the poem (lit. The poem gets out from my heart).’ (BEJ\_MV\_NARR\_134\_Tokar\_47)

<sup>7</sup> The construction with the auxiliary verb meaning ‘take’ is an emphatic construction, similar to the English construction ‘do’ + V.

In addition to the middle verb *kan* ‘to know’, Beja has a conventionalized idiom which expresses metaphorically AWARENESS and KNOWLEDGE which includes *ginʔa* ‘heart’. This body part term, taken as a metonymy for the whole person, is the subject and agent of the transitive verb *miri* ‘to find’.<sup>8</sup> In (8), its direct object is the action noun derived from the verb *ʔakir* ‘to be, become strong’ with a possessive bound pronoun in the accusative case. It illustrates the metaphor KNOWING IS ACTION OF THE HEART.

- ### 3.5. 'Understand'

The verb *tig/dig* whose basic meaning is ‘to be, become heavy’, also means ‘to pause and reflect, to take time to think, to have discriminating intelligence’,<sup>9</sup> a meaning also found in the derived adjective *tiga/diga* as in (9).

- (9) *w=had?a*                      *tiga:=b=i*  
 DEF.SG.M=chief    heavy=INDF.M=COP.3SG  
 ‘The chief has discernment.’ (Dictionary)

In a conventionalized idiom, which again illustrates the HEART FOR PERSON metonymy, the adjective is used in an attributive position to

<sup>8</sup> The colexification of 'to find' with a cognitive meaning, usually 'to think' is attested in many European languages (see e.g. French *trouver* or German *finden*, cf. e.g. Goddard 2003). We are not aware of collocations with 'heart'.

<sup>9</sup> 'To understand' is an Arabic loan, *afam* (< *fahima*).

*ginʔa* ‘heart’, which bears an ablative clitic. It either means that someone has difficulties in understanding or is too careful, one more metaphor of the type HEART IS A CONTAINER. The collocation of heart with heaviness is attested in other languages (e.g. Dutch, German, see Foolen 2008: 383, 385), but to the best of our knowledge, for the semantic domain of negative, depressing, and sad emotions.

- (10) *diga*                      *ginʔ=i:*  
          heavy                  heart=ABL.SG  
          ‘Slow on the uptake / circumspect.’ (lit. heavy from heart)  
          (Dictionary)

### 3.6. ‘Heed, take care of’

Beja has two verbs for the concept of HEEDING, *hilli*, ‘to heed, to pay attention’ and *ho:j finha* ‘to take care of, to heed, to pay attention’ (lit. ‘to need from it’). A heart-based metaphor is also used. In this case, *ginʔa* ‘heart’ is the direct object and patient of the action verb *dʔ* ‘to do’. The whole metaphorical construction obligatorily includes a locative complement, which can be animate or inanimate. This complement is either the 3<sup>rd</sup> person ablative pronoun (11)–(12), or an NP with the locative postposition *=i:b* (SG) / *=e:b* (PL) ‘in’ (13). The construction illustrates the HEART FOR PERSON metonymy in a spatial construction, and the conceptual metaphor COGNITION IS ACTION WITH A CENTRIFUGAL MOTION.

- (11) *u:n*                      *u:=tak*                      *o:n*  
       PROX.SG.M.NOM   DEF.SG.M.NOM=man   PROX.SG.M.ACC  
       *w=harri*                      *i-wik=aj*                      *i=ginʔ=o:k*  
       DEF.SG.M=sorghum   3SG.M-cut\PFV=CSL   DEF.M=heart=POSS.2SG.ACC  
       *ho:j*              *dʔi-na*  
       3ABL              do-IMP.PL  
       ‘Since this man has harvested this sorghum, pay attention to him!  
       (lit. Do your heart from him!)’ (BEJ\_MV\_NARR\_56\_dove\_011-  
       024)

- (12) *i=rab=i jo:* *han winne:t ho:k*  
 DEF.M=belongings=POSS.3SG.GEN also plenty 2SG.DAT  
*i=gin?=o:* *ho:j ba:=d?i*  
 DEF.M=heart=POSS.3SG.ACC 3ABL NEG.PROH=do\CVB.SMLT  
*bak birir-a d?i-ja:=b=u*  
 thus spread-CVB.MNR do-CVB.MNR=INDEF.M.ACC=COP.3SG  
 ‘He had also scattered his belongings really without taking care of them, like that.’ (BEJ\_MV\_NARR\_37\_Abu\_Fatna\_031-034)
- (13) *taktak=e:b i=gin?=o:* *i-d?i-na*  
 together=LOC.PL DEF.M=heart=POSS.3SG.ACC 3M-do\PFV-PL  
 ‘They took care of each other (lit. They did their heart in each other).’ (BEJ\_MV\_NARR\_13\_grave\_026-029)

The same construction is also fully conventionalized to express that one is paying full attention to an action. It can be translated by ‘closely’, ‘thoroughly’, ‘with curiosity’. In (14), *d?i* ‘to do’ is associated with the verb representing the exact action performed by the subject, *fibib* ‘to look’, while in (15), the perception verb is left unexpressed.

- (14) *o:=bu:n jhak-s-ja:n=i:t*  
 DEF.SG.M.ACC=coffee get\_up-CAUS-PFV.3PL=COORD  
*kalo:-ja:n=ho:b i=gin?=o:*  
 roast-PFV.3PL=when DEF.M=heart=POSS.3SG.ACC  
*ho:j i-d?i i-fibib*  
 3ABL 3SG.M-do\PFV 3SG.M-look\PFV  
 ‘They took the coffee, and when they roasted it, he looked with curiosity (lit. He looked he did his heart from it).’ (BEJ\_MV\_JOKE\_16\_coffee\_06-09)
- (15) *t=?alba jha:k-s-e:ti:t nangi:l=a:t*  
 DEF.F=can get\_up-CAUS-CVB.SEQ open\IPFV.3.SG.F=COORD  
*to:=na t=ho:j*  
 DEF.SG.F.ACC=thing REL.F=3ABL

*ti:·fi:·=na:=t=i:b*

3SG.F-be\_there\AOR=thing=REL.F=LOC.SG

*o:=ginʔ=o:*

DEF.SG.M.ACC=heart=POSS.3SG.ACC

*dʔ-i:ti:t*

do-CVB.SEQ

‘She lifts up the can, and she opens it, and after she has looked thoroughly at what is inside... (lit. She put her heart in what was inside from it)’ (BEJ\_MV\_NARR\_140\_chiefPrison\_121-125)

## 4. Heart metaphors of emotions

Heart metaphors of emotions can be positive or negative.<sup>10</sup> Positive ones are more numerous and are related to PLEASURE, be it COMFORT, HAPPINESS or EASE, and to COURAGE, but, so far in our data, not to LOVE, as e.g. in English (Kövecses 1986), Basque (Ibarretxe-Antuñano 2008) or French, Russian, and many other languages (e.g. Karandashev 2019). Negative ones concern WORRY, DESPAIR and PAIN.

### 4.1. ‘Comforting’

Not only cognition is conceived as an action, but in an appropriate context, the spatial heed metaphor presented above (§3.6) can also express a positive emotion of comforting after a negative experience, illustrating the conceptual metaphor EMOTION IS ACTION WITH A CENTRIFUGAL MOTION. One such example occurred in a folktale where a girl is kidnapped by an evil bird. It shows how basic conceptual categories such as COGNITION and EMOTION may overlap, even in their metaphorical and syntactic constructions. However there is a semantic distinction between the two conceptual interpretations. Here the ablative pronoun refers to the source of the emotion, while in §3.6 it refers to the experiencer.

<sup>10</sup> See e.g. the online website HUMAINE-EARL for a classification of emotions. See also Chantrain (forth.) for a discussion of the various classifications, and Ponsonnet (2014).

- (16) *u:n*                      *ani*                      *ha:j*    *hawa:j-i*    *a-ndi*  
 PROX.SG.M.NOM    1SG.NOM    COM    play-FUT    1SG-say\IPFV  
*i=ginʔ=i*                      *ho:j*    *i-dʔa*                      *a-ndi*  
 DEF.M=heart=1SG.ACC    3ABL    FUT.SG-do    1SG-say\IPFV  
 ‘I’ll play with it (the statue of a cow). It will comfort me (lit. I will do my heart from it).’ (BEJ\_MV\_NARR\_160\_owl\_133-135)

#### 4.2. ‘Entertainment’

The same construction can be used without a spatial reference for the expression of entertainment, being just an EMOTION IS ACTION metaphor. The absence of an ablative marker implies that there was no previous negative experience. When A and P are the same, as in (18), the use of a bound possessive pronoun on *ginʔa* is not required.

- (17) *u:=dhaj*                      *i=ʔara:w=i*  
 DEF.SG.M.NOM=people    DEF.M=friend=POSS.1SG.ACC  
*i=ginʔ=o:*                      *i:-dʔi-n=ho:b*  
 DEF.M=heart=POSS.3SG.ACC    3-do\AOR-PL=when  
*handi:=b*                      *ʃu:m-an*  
 tree=INDF.M.ACC    go\_in-PFV.1SG  
 ‘When the people were entertaining my friend, I went under a tree (lit. The people were doing my friend their heart).’ (BEJ\_MV\_NARR\_43\_hyena\_man\_114-117)
- (18) *ti=ba:sankʷi*                      *i:=tʔa*                      *ginʔa*    *dʔu:j-i:=t*  
 DEF.F=lyre    3SG.M-hit\AOR    heart    do\N.AC-GEN=INDF.F  
*hajʔa:=t=i:*  
 way=INDF.F=ABL.SG  
 ‘He was playing the lyre as a way to entertain himself (lit. From a way of doing heart).’ (BEJ\_MV\_NARR\_60\_rebab\_028-030)

### 4.3. ‘Happiness’

For the expression of happiness, *ginʔa* ‘heart’ is used as the direct object and patient of the gustatory verb *miɖiɖ* ‘to lick’, implying a metaphor of the type HAPPINESS IS TASTING ONE’S HEART, and once more the HEART FOR PERSON metonymy.<sup>11</sup>

- (19) *t=ʔi:ba:b*      *o:=ginʔ=i*      *ti-mɖiɖ*  
 DEF.F=travel    DEF.SG.M.ACC=heart=POSS.1SG.ACC    3SG.F-lick\PFV  
 ‘The travel made me very happy (lit. The travel licked my heart).’  
 (Dictionary)

### 4.4. ‘Ease’

Another positive emotion expressed with the heart is ease and relaxation. It involves the tactile verb *tha* ‘to touch’, of which *ginʔa* is the direct object, and the noun *he:r* ‘good’ with the ablative clitic. It illustrates a subtype of the conceptual metaphor EMOTION IS PHYSICAL EXPERIENCE, namely EASE IS TACTILE PERCEPTION.

- (20) *ani*      *to:=na*      *to:=na:=t-i=da*  
 1SG.NOM    DEF.SG.F.ACC=thing    DEF.SG.F.ACC=thing=INDF.F-GEN=DIR  
*jʔ-a=jo:k*  
 come-CVB.MNR=POSS.2SG.ACC  
*ka=a-ki=ho:k-a*  
 NEG.IPFV=1SG-become\PFV=OBJ.2SG-ADRE.M  
*i=ginʔ=o:k*      *w=he:r=i:*  
 DEF.M=heart=POSS.2SG.ACC    DEF.SG.M=good=ABL.SG  
*tha-a*  
 touch-IMP.SG.M  
 ‘I did not come to you about that thing, feel at ease!’ (BEJ\_MV\_  
 NARR\_08\_drunkard\_121-123)

<sup>11</sup> *Se lécher les lèvres/les babines d’avance* (lit. ‘to lick one’s lips/chops beforehand’) in French, also means ‘to be happy’, but makes use of another body part.

#### 4.5. ‘Pleasure’

In a conventionalized idiom, the heart is conceived as strong (*ʔakra*). It is also associated with pleasure, as well as determination, corresponding to the metaphor PLEASURE IS A STRONG HEART.

- (21) *jʔ-i:n=ho:k*                      *ni-ja:d*                      *ʔakr-a*  
 come-FUT.PL=OBJ.2SG 1PL-say\IPFV                      be\_strong-CVB.MNR  
*ginʔ=i:*                      *dh=o:n*                      *bisir-a*  
 heart=ABL.SG                      DIR=POSS.1PL.ACC                      prepare-IMP.SG.M  
 ‘We’ll come to you by all means! Be prepared for us!’ (BEJ\_MV\_NARR\_57\_Ababda\_018-020)
- (22) *adara-na*                      *ʔakr-a*                      *ginʔ=i:*  
 dance-PFV.1PL                      be\_strong-CVB.MNR                      heart=ABL.SG  
 ‘We danced with all our hearts.’ (BEJ\_MV\_NARR\_57\_Ababda\_231-233)

#### 4.6. ‘Courage’

In European languages, the heart is often used in “conventional expressions to symbolize courage and state of mind” since courage was placed in the heart, especially in the Middle Ages (Gutiérrez Pérez 2008: 36–37). This is also the case in Beja, where the HEART AS A CONTAINER metaphor applies, but in a negative locative construction: *mirk<sup>wa</sup>:j* ‘fearing’ is the subject of the locative-existential verb *da* ‘to be there’ marked for the negative polarity; *ginʔa* ‘heart’ is marked as an oblique locative complement with the locative postposition.

- (23) *mi-rk<sup>wa</sup>:j*                      *ho:*                      *ka=da-ja*                      *nu:n*  
 N.AC-fear                      1SG.DAT                      NEG.IPFV=be\_there-PFV.3SG.M                      only  
*i=ginʔ=i:b*  
 DEF.M=heart=LOC.SG  
 ‘[Is it because I am passing near tombs, that I get the creeps?  
 I ask myself. I don’t know what’s happening to me, I move  
 forward,] I just become courageous (lit. There is no fear in the  
 heart to me).’ (BEJ\_MV\_NARR\_05\_eritrea\_220-226)

#### 4.7. ‘Worry’

WORRY is one of the three heart-based metaphors for negative emotions found in the data. *ginʔa* is used in an equational construction with the copula, as the dependent of a genitive phrase with the word for ‘pain’ as the head. It corresponds to a well attested conceptual metaphor EMOTION IS PHYSICAL STATE. Thus worry is conceived as a physical suffering, i.e. WORRY IS SUFFERING OF THE HEART, and sickness is the source domain. A similar metaphor occurs e.g. in Dutch (Foolen 2008: 382), but in ancient Egyptian SUFFERING OF THE HEART is linked to another negative emotion, SADNESS (Chantraine forth.).

- (24) *i=mana*                      *ginʔ-i:=t*                      *lhanaj=t=a*  
 DEF.M=bowels      heart-GEN=INDF.F      pain=INDF.F=COP.3PL  
 ‘The offsprings (lit. bowels) are a pain of the heart (i.e. they bring worries).’ (BEJ\_MV\_POEM\_05\_family\_25)

#### 4.8. ‘Despair’

In the second negative metaphor, *ginʔa* is the experiencer subject of the cognitive verb *gam* ‘to ignore’. This metaphorical construction expresses despair, bewilderment and anxiety. It corresponds to the EMOTION IS IGNORANCE metaphor, in this particular case ANXIETY IS IGNORANCE. A similar metaphor in ancient Egyptian means ‘to act foolishly’ (Chantraine forth.), a possible consequence of despair.

- (25) *u:n*                      *u:=tak*                      *hamu:r=i:*  
 PROX.SG.M.NOM      DEF.SG.M.NOM=man      be\_poor\N.AC=ABL.SG  
*u:n*                      *u:=kna*  
 PROX.SG.M.NOM      DEF.SG.M.NOM=owner  
*u:=ginʔa*                      *gam-a:=b=u*  
 DEF.SG.M.NOM=heart      ignore\MID-CVB.MNR=INDF.M.ACC=COP.3SG  
 ‘This man himself, because of poverty, he was desperate (lit. The heart was ignoring).’ (BEJ\_MV\_NARR\_26\_poor\_002-006)

#### 4.9. 'Pain'

The last metaphor for a negative emotion concerns bad memories. It is used in a conventionalized idiom, the genitive noun phrase *ginʔ-i:=t hankar* 'painful memory', which literally means 'heart's movement', exemplifying the metaphor PAIN IS MOTION OF THE HEART. Emotion is indeed often associated to a lack of quietness, see e.g. the articles in Tersis & Boyeldieu (eds.) (2017), and Chantrain (forth.).

### 5. Conclusion

Beja heart-based metaphors illustrate one more case of a language where this organ is conceived as the locus for both COGNITION and EMOTION, alongside e.g. Chinese (Yu 2007, 2008), Northeastern Neo-Aramaic (Wolk 2008), or Ancient Egyptian (Chantrain p.c.), but, as far as we know, not in many other languages of Africa. However, most of the studies we were able to consult were dedicated to the domain of EMOTION, not to COGNITION, and the African scarcity may be only due to an artefact of an oriented research. Not surprisingly Beja makes use of the widespread metonymy HEART FOR PERSON (for all cognitive metaphors but forget, and for one emotion, happiness), and the well-known metaphors HEART IS A CONTAINER (understand, forget, courage), COGNITION IS MOTION (think, remember, understand), COGNITION IS PERCEPTION (think), COGNITION IS ACTION (be aware, know, heed), EMOTION IS MOTION (pain), EMOTION IS PERCEPTION and EMOTION IS PHYSICAL EXPERIENCE (ease, happiness), EMOTION IS ACTION (comfort, entertainment), EMOTION IS STRENGTH (pleasure), EMOTION IS PHYSICAL STATE (worry), EMOTION IS IGNORANCE (despair). Nevertheless Beja displays a number of peculiarities in the choice of the collocations with the heart including in relation with the target semantic domains of the metaphors. For instance, as already mentioned, if 'jump' is also used as a collocation of 'heart' in ancient Egyptian, it is not in the domain of cognition as in Beja, but in the domain of emotions. As Gaëlle Chantrain suggested us (p.c.), the "jumping heart" in Beja is jumping toward something;

thoughts are going to a specific direction, toward a specific target. The jumping of the heart is a target-oriented centrifugal motion. Conversely, the “jumping heart” in Egyptian is jumping out the body but with no specific target. It is a source oriented centrifugal motion. The important point in the latter case is that the heart is not in the body anymore, meaning that basically one is out of one’s mind.

What remains to be studied, in order to weigh the exact cultural salience of heart metaphors in the Beja society, are the metaphors based on other body parts terms, and a survey based on more data and elicitation techniques.

Пусть это небольшое исследование принесет Константину все возможные положительные эмоции!

### Acknowledgments

The gratitude of the first author goes to all her Beja consultants, in particular to Ahmed Abdallah Mohamed-Tahir and his family at Sinkat, and to Gaëlle Chantraine for fruitful discussions, her helpful insight and suggestions. We also thank the two anonymous reviewers and the editors for their comments and suggestions. This research benefited from public funding from the CNRS research unit LLACAN, and was also partially supported by a public grant overseen by the French National Research Agency (ANR) as part of the program “Investissements d’Avenir” (reference: ANR-10-LABX-0083). It contributes to the IdEx Université de Paris — ANR-18-IDEX-0001.

### Abbreviations

ABL – ablative	DISTR – distributive	N.AC – action noun
ACC – accusative	F – feminine	NEG – negative
ADRE – addressee	FUT – future	NOM – nominative
AOR – aorist	GEN – genitive	OBJ – object
CAUS – causative	GNRL – general	PFV – perfective
COM – comitative	IMP – imperative	PL – plural
COORD – coordination	INDF – indefinite	POSS – possessive

COP – copula	IPFV – imperfective	PROH – prohibitive
CSL – causal	L – linker	PROX – proximal
CVB – converb	LOC – locative	REL – relator
DAT – dative	M – masculine	SEQ – sequential
DEF – definite	MID – middle	SG – singular
DIR – directional	MNR – manner	SMLT – simultaneity

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