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Abstract

Siraiki is a major but understudied Indo-Aryan language spoken mainly in central Pakistan. Its causative system, which has never been described in detail, shows many similarities with causative systems in related modern Indo-Aryan languages, but also differences which render it unique within this family. We provide a detailed account of causativization in Siraiki, and attempt to explain the synchronic complexity of the Siraiki data, as well as the broader variation within modern Indo-Aryan, in diachronic terms.

1 Introduction

Siraiki is a major but understudied modern Indo-Aryan language, spoken mainly in central Pakistan. It ostensibly has three morphological causative markers, the 'primary causative' suffix *-āv*, the 'double causative' suffix *-vāv*, and a less productive suffix *-āl*, which we call the 'l-causative'; these three formations are functionally distinct, although they share a number of features and partially overlap in functionality. In addition to these, Siraiki also has a construction that expresses causation periphrastically, in which the verb *kʰaṛāvaṇ* 'to make stand' or *lāvaṇ* 'to attach/set' governs an embedded infinitival clause. These formations all have parallels in other modern Indo-Aryan languages, but the synchronic system attested in modern Siraiki is, as far as we know, unique, at least within this language family. Siraiki therefore also provides a new datapoint for reconstructing the diachronic processes which underlie the attested causative systems of modern Indo-Aryan languages.

In §2, we provide a short introduction to Siraiki and discuss transitivity alternations in the language, the equivalents of which in other Indo-Aryan languages are often treated as causative alternations. In §§3–7, we discuss in turn the causative constructions attested in Siraiki, beginning with the morphological causatives in *-āv*, *-vāv* and *-āl*, and ending with the periphrastic construction. In §8 we present a historical account of the complex synchronic situation in Siraiki and other modern Indo-Aryan languages.

2 The Siraiki Language

2.1 Introduction

Siraiki is a modern Indo-Aryan language, spoken on the western boundary of the Indo-Aryan linguistic area, primarily in the southern and western regions of Pakistan's Punjab province

and in southeastern parts of Khyber Pakhtunkhwa province, but also by a large historically immigrant population in Sindh (immigration beginning from the 16th century), and by some settlers in the Kacchi region of Balochistan province. Estimates of the total population of Siraiki speakers vary between "at least 15,000,000", i.e. 20 percent of the population of Pakistan in 1976, as suggested by Christopher Shackle (1976: 1), the only modern linguist of the language, and 9.83 percent of the population of Pakistan (as per central government figures; Rahman 1996: 1), i.e. about half as much; the total, at present, may therefore fall somewhere between 20–40 million.

Despite its size, Siraiki has attracted almost no linguistic attention. Beside the reference grammar of Shackle (1976), and brief descriptions in works such as Garry & Rubino (2001), there are to our knowledge no detailed linguistic accounts or analyses of any linguistic phenomena in Siraiki prior to the forthcoming grammatical survey in Bashir et al. (2019). Linguistically, Siraiki is part of a larger dialect continuum: it is the most prominent member of the dialect group which Grierson (1919) labeled 'Lahnda'; this group is closely related to Panjabi, spoken to the east, and Sindhi, to its south; but there are significant differences between Siraiki and Panjabi, both in terms of phonology and, crucially for the present topic, in terms of the verb system; the Siraiki verb system (and also its phonology) is more similar to that of its southern neighbour, Sindhi, but in most respects Siraiki and Sindhi are not that close either.[1] The causative system of Siraiki differs in several ways from that of Panjabi and Sindhi. The only previous account of Siraiki causatives is a brief overview in Shackle (1976: 74–75). The data presented in this paper, originating in southern Siraiki variety Shackle (1976: 7), is based on the native competence of the second author, and our account differs in various ways from that of Shackle.

2.2 Transitivity in Siraiki

The Siraiki verbal system shares its major features with many other more familiar Indo-Aryan languages, such as Hindi-Urdu. There are two genders (masculine/feminine), two numbers

[1] On the complex dialectology of Indo-Aryan languages, see Masica (1991). The political recognition of Siraiki as a separate language from both Panjabi and Sindhi has gained significant ground only since the 1960s as a result of local socio-political movements (see Shackle 1977). Linguistically, however, its separate status has been recognized for significantly longer, albeit under a variety of (sometimes very local) names. Siraiki came to the attention of western scholars as early as the 19th century. A bible translation into Siraiki (Serampore Missionaries 1819) was undertaken in 1819 based on the dialect of the southern Siraiki region of *Ouch*, under the label "Mooltan language" due to the association of the language with this city of considerable historical importance. Burton (1849), in an early sketch grammar, used the names *Jataki*, *Belochki* and *Siraiki*. O'Brien (1881) provided a medium-sized glossary of the language and some introductory remarks on its grammar in comparison with Sindhi and Panjabi, using the name *Multani*. Bomford (1895) supplied grammatical notes on the language under the name *Uchi*. Jukes (1900) collected a large-sized glossary under the name *Jatki*. In his *Linguistic Survey of India* (Grierson 1903–1922), Grierson (1919) gave an outline of the language and a skeleton grammar of several related dialects; he employed a collective label (south) *Lahnda* while observing that in Sindh where a substantial portion of its speakers were settlers (and the lower Derajats), it was actually called *Siraiki*. Smirnov (1975) assembled a comparative grammar with copious notes, incorporating material from several dialects, and called the language *Lahndi*. The only modern western work, as noted, is that by Shackle (1976). Nevertheless, in Cardona & Jain (2003) Siraiki is discussed only under the heading of Panjabi (Shackle 2003). There is a dialect of Sindhi which is also sometimes labelled 'Siraiki' (e.g. Khubchandani 2003: 623), but the dialect is genetically a part of Sindhi and not a form of the Siraiki language which is the subject of this paper.

(singular/plural), and two morphological cases (direct/oblique); morphological case is barely marked outside of the pronominal system. Besides the morphological cases, clitic postpositions are used as oblique case markers. As in most other modern Indo-Aryan languages, Siraiki shows a split-ergative alignment in which the subject appears in the oblique (ergative) case in the perfective of transitive verbs, but in the direct case otherwise. The verb agrees with any direct case argument: the subject in the imperfective and perfective intransitive, and either the direct case object, or nothing (if the object is differentially marked in the dative case), in the perfective transitive.[2]

Finite verbal expressions in general require a lexical verb form, historically a participle, which agrees in gender and number with the agreeing argument (if any), and an auxiliary expressing tense and mood, and agreeing in person and number. Lexical verb forms are morphologically distinguished as either imperfective intransitive (usually with the suffix *-(n)d*), imperfective transitive (with the suffix *-ēnd*), or perfective (with the suffix *-y*). In this paper we will mostly be concerned with transitive verbs, and most examples given are in the imperfective, so the most important of these is *-ēnd*; as discussed below, imperfective causatives are marked with *-ǣnd*, which is a result of contraction of *-ēnd* with the preceding causative morpheme.

The following examples illustrate the morphological patterns. Examples (1) and (2) show the consistent subject agreement in the intransitive, as well as the imperfective intransitive and perfective morphemes on the verb. Ex. (3) illustrates the transitive imperfective morpheme and subject agreement in the transitive imperfective; (4) illustrates direct case object (4a) and default (4b) agreement in the transitive perfective.[3]

(1) a. *ō* *bʰiṛᵃ-d-ā* *ē*
DEM.DIR fight.INTR-IMPFV-M.SG be.PR.3SG
'He fights.'

b. *ō* *bʰiṛᵃ-d-ī* *ē*
DEM.DIR fight.INTR-IMPFV-F.SG be.PR.3SG
'She fights.'

(2) a. *ō* *bʰiṛ-y-ā* *ē*
DEM.DIR fight.INTR-PFV-M.SG be.PR.3SG
'He fought.'

b. *ō* *bʰiṛ-ī* *ē*
DEM.DIR fight.INTR-PFV-F.SG be.PR.3SG
'She fought.'

[2]Similarly to Hindi-Urdu, differential marking of the object is primarily based on animacy (animate objects being marked dative, inanimate appearing in the direct case), but the details are complicated and not relevant to this paper. Where there is no agreement controller, the verb appears in the 3sg.m.

[3]The abbreviations used in glossing are as follows: 2 second person, 3 third person, DEM Demonstrative, DIR Direct, OBL Oblique, GEN Genitive, LOC Locative, M Masculine, F Feminine, SG Singular, PL Plural, PR Present, PST Past, PFV Perfective, IMPFV Imperfective, INF Infinitive, TR Transitive, INTR Intransitive, CONJ Conjunctive Participle, CS1 Primary Causative (*-āv*), CS2 (morphologically) Double Causative (*-vāv*), CS3 'l-Causative' (*-āl*), PASS Passive. Case on nouns is indicated even when morphologically not distinct, but number and gender are glossed only when morphologically marked.

(3) a. *ō* *dāṇē* *kuṭ-ēndī* *ē*
DEM.DIR grain.M.PL beat.TR-IMPFV-F.SG be.PR.3SG
'She thrashes the grains.'

b. *ō* *tæ=kũ̃* *kuṭ-ēnd-ī* *ē*
DEM.DIR you.OBL=DAT beat.TR-IMPFV-F.SG be.PR.3SG
'She beats/thrashes you.'

(4) a. *ũ̃* *dāṇē* *kuṭṭ-y-ē* *in*
DEM.OBL grain.M.PL beat.TR-PFV-M.PL be.PR.3PL
'She(/he) thrashed the grains.'

b. *ũ̃* *tæ=kũ̃* *kuṭṭ-y-ā* *ē*
DEM.OBL you.OBL=DAT beat.TR-PFV-M.SG be.PR.3SG
'She(/he) beat/thrashed you.'

2.3 Transitivity alternations

A central feature of the Siraiki verbal system is the paradigmatic pairing of intransitive and transitive stems. Most Siraiki verbs display two morphologically distinct stems, one intransitive, the other transitive; some are exclusively transitive or intransitive but exist in a suppletive relationship with another stem; a number of verbs, generally infrequent ones, show no pairing.

Verbs with two morphologically distinct stems can be further classified into three groups depending on the type of stem alternation. The least distinct alternation involves only a change of vowel in the stem, for example:

(5) a. *ɓal-* 'kindle (intr.)' vs. *ɓāl-* 'kindle (tr.)'
b. *ʈʰar-* 'cool (intr.)' vs. *ʈʰār-* 'cool (tr.)'
c. *visᵃr-* 'forget (intr.)' vs. *visār-* 'forget (tr.)'
d. *kʰiṛ-* 'be teased' vs. *kʰēṛ-* 'tease'
e. *miṭ-* 'be erased' vs. *mēṭ-* 'erase'
f. *nipᵃṛ-* 'wring (intr.)' vs. *nipēṛ-* 'wring (tr.)'
g. *ʃul-* 'move along (intr.)' vs. *ʃōl-* 'move along (tr.)'
h. *luṛʰ-* 'drift' vs. *lōṛʰ-* 'set adrift'
i. *vičʰᵃṛ-* 'be separated/torn apart' vs. *vičʰōṛ-* 'separate/tear apart'

This group of verbs is the largest of all. Among these, the vowel of the transitive stem is underlyingly long, while the vowel of the intransitive stem is necessarily short.[4] As we will see below, inflectional morphological processes, including causativization, can affect the vowel length and vowel quality in verbal roots due to stress shift. When such processes

[4]The vowels of the transitive stems reflect the Old Indo-Aryan guṇa grade.

affect transitive stems of the type in (5), vowel weakening neutralizes the difference between transitive and intransitive pairs; that is, for example, the transitive stem *lōṛʰ-* 'set adrift' surfaces as *luṛʰ-* in the causative, indistinguishable from the intransitive stem *luṛʰ-* 'drift'. This complication will be discussed further below.

Instead of a vowel alternation, some verbs show a change in the final consonant of the stem:

(6)
a. *ɓajʰ-* 'be tied' vs. *ɓanʰ-* 'tie'
b. *ʃaṽ-* 'be born' vs. *ʃaṇ-* 'give birth'
c. *dʰōp-* 'be washed' vs. *dʰōv-* 'wash'
d. *ʃāp-* 'be known' vs. *ʃāṇ-* 'know'
e. *čʰiʃ-* 'be cut' vs. *čʰin-* 'cut'
f. *pīč-* 'be drunk' vs. *pīv-* 'drink'

This alternation is never neutralized. Some verbs show stem pairs which differ in both vowel and final consonant:

(7)
a. *pʰas-* 'be trapped' vs. *pʰāh-* 'trap'
b. *pʰaṭ-* 'be torn' vs. *pʰāṛ-* 'tear'
c. *ɗis-* 'seem' vs. *ɗēkʰ-* 'see'
d. *vik-* 'be sold' vs. *vēč-* 'sell'
e. *ḍʰuk-* 'be carried' vs. *ḍʰōh-* 'carry'
f. *ɗubʰ-* 'be milked' vs. *ɗōh-* 'milk'

Just as with the verbs that show only a vowel alternation, the vowel of the transitive stem may undergo reduction in certain morphological contexts, but with this class the consonant alternation keeps the stems distinct. Finally, suppletive pairs are distinct from the previous class because they show no regular patterning between intransitive and transitive stem:

(8)
a. *āv-* 'come' vs. *ān-* 'bring'
b. *ḍʰah-* 'fall down' vs. *saṭ-* 'throw down'
c. *labʰ-* 'be found' vs. *ɠōl-* 'find'
d. *nikᵃl-* 'come out/emerge' vs. *kaḍʰ-* 'take out/expel'
e. *tʰīv-* 'become' vs. *kar-* 'do'
f. *vañ-* 'go' vs. *nēv-* 'take away'

Verbs which have no natural pair may be intransitive only or transitive only, for example: intransitive *baṇ-* 'be built', *bʰiṛ-* 'fight', *čimk-* 'shine/glitter', *druk-* 'run', *gʰis-* 'slip', *nač-* 'dance'; transitive *apᵃṛ-* 'catch/seize', *čuṭ-* 'target', *ḍʰak-* 'cover/imprison', *kuṭ-* 'beat/thrash', *luṭ-* 'loot/rob', *palʰᵃr-* 'forgive'.

The following examples illustrate intransitive/transitive verb pairs: (9) shows a suppletive pair, the intransitive stem taking the intransitive marker in the imperfective, the transitive stem taking the transitive; (10) shows a pair from the third group above, and (11) a pair from the first.

(9) a. *tũ̃* *nikal-d-ā* *ẽ̃*
you.DIR come_out.INTR-IMPFV-M.SG be.PR.2SG
'You come out.'

b. *gāmaṇ* *tæ=kũ̃* *kaḍʰ-ēnd-ā* *ē*
Gaman.DIR you.OBL=DAT take_out.TR-IMPFV-M.SG be.PR.3SG
'Gaman takes you out/expels you.'

(10) a. *miṭṭī* *ḍʰukᵃ-d-ī* *ē*
Soil.DIR.F.SG be_carried.INTR-IMPFV-F.SG be.PR.3SG
'The soil is carried.'

b. *gāmaṇ* *miṭṭī* *ḍʰuh-ēnd-ā* *ē*
Gaman.DIR soil.DIR.F.SG carry.TR-IMPFV-M.SG be.PR.3SG
'Gaman carries the soil.'

(11) a. *kāṭʰyã̃* *luṛʰᵃ-d-yã̃* *in*
wood.DIR.F.PL drift.INTR-IMPFV-F.PL be.PR.3PL
'The wood drift.'

b. *gāmaṇ* *kāṭʰyã̃* *luṛʰ-ēnd-ā* *ē*
Gaman.DIR wood.DIR.F.PL set_adrift.TR-IMPFV-M.SG be.PR.3SG
'Gaman sets the wood adrift.'

Note the vowel weakening in the transitive stems in (10b) and (11b) vs. (7e) and (5h) respectively; this means that the transitivity of the stem in (11b) is distinguished only by the transitive imperfective suffix *-ēnd-* (besides the presence of the object).

Parallel alternations between intransitive and transitive stems, particularly those involving purely vowel alternation (as in (5)), are found in a number of modern Indo-Aryan languages, including Hindi-Urdu, Panjabi, Rajasthani, Sindhi, and Kashmiri. For example, in Hindi-Urdu (Shapiro 1976, Hook 1996) the two patterns in (5) and (7) are found (12a-b), as well as less predictable alternations (12c), and labile stems which can be either transitive or intransitive (12d):

(12) a. *kaṭ-* 'be cut' vs. *kāṭ-* 'cut'
b. *pʰat-* 'tear (intr.)' vs. *pʰāṛ-* 'tear (tr.)' (cf. 7b)
c. *lipaṭ-* 'stick (intr.)' vs. *lapēṭ-* 'stick (tr.)'
d. *bun-* 'be knitted' vs. *bun-* 'knit'

In Kashmiri (Hook 2006), we find patterns similar to those in (5), (7) and (8):

(13) a. *gal-* 'melt (intr.)' vs. *gāl-* 'melt (tr.)'
b. *kʰas-* 'climb' vs. *kʰār-* 'lift, raise'
c. *yi-* 'come' vs. *an-* 'bring'

All four patterns in Siraiki are also found in Marathi (Shibatani & Pardeshi 2002, Pardeshi 2016), as well as labile stems:[5]

(14) a. *jaḷ-* 'burn (intr.)' vs. *jāḷ-* 'burn (tr.)'
b. *lāg-* 'be attached' vs. *lāv-* 'attach'
c. *pʰuṭ-* 'burst (intr.)' vs. *pʰoḍ-* 'burst (tr.)'
d. *ye-* 'come' vs. *ān-* 'bring'
e. *moḍ-* 'break (intr.)' vs. *moḍ-* 'break (tr.)'

In most work on these languages, these alternations are analysed as being on a parallel with suffixal transitive/causative marking, and in some cases are explicitly labelled as causative, as opposed to transitive, alternations. So, for Hindi Shapiro (1976) and Hook (1996) both treat suffixation of *-ā-* (historically and to some extent synchronically equivalent to the Siraiki causative marker *-āv-*) as a further possibility alongside the alternations in (12); Shapiro labels these alternations the 'First Causative', while Hook refers merely to a transitive-intransitive alternation. Shibatani & Pardeshi (2002) and Pardeshi (2016) likewise make no distinction between the stem alternations in (14) and suffixation of *-av-* (cognate of Siraiki *-āv-* and Hindi-Urdu *-ā-*), treating all these alternations as specifically causative alternations.

Such assimilation of stem alternations with suffixation, particularly under the heading of causativity, cannot be maintained in Siraiki. We believe that it is important to distinguish causativity understood in broad semantic terms from causativity as a syntacto-semantic phenomenon. In broad terms, any situation in which one participant causes a change of state in another participant can be understood as a 'causative', e.g. the transitive sense of verbs like 'melt', 'break', 'burst', 'burn', and even the classic example 'kill' understood as meaning 'cause to die'. This is the definition of 'causative' adopted e.g. by Pardeshi (2016) for Marathi. In at least some languages, however, there is a clear syntacto-semantic category of causative which does not necessarily include all verb stems whose meaning include a caused change of state. This was the case in Old Indo-Aryan, for example: in Classical Sanskrit there is a clear morphosyntactic and semantic distinction between causative verb forms in stricto sensu, formed using the suffix *-áya*, and other, non-causative, transitive verb forms, which includes many verbs which semantically entail a change of state.

As we show below, in Siraiki there are clear grammatical differences between transitive verb stems which participate in the alternations seen in (5)–(8), and transitive/causative stems

[5]Labile stems exist in Siraiki for some speakers, for example *luṭ-* 'rob, plunder', *mud-* 'chop', and *bʰar-* 'fill (tr.)' could be both transitive and intransitive ('be plundered', 'be chopped', 'fill (intr.)'), but for many speakers such stems are transitive only, intransitive versions being derived by passivization.

derived by means of the causative suffixes, which show that on a syntacto-semantic level, at least, the transitivity alternations in (5)–(8) cannot be analysed as causative alternations. In this Siraiki appears to differ from other modern Indo-Aryan languages. The system of intransitive-transitive stem alternations is more extensive in Siraiki than in languages such as Hindi-Urdu, since the vast majority of basic stems in Siraiki exist in a pair, while in other Indo-Aryan languages a smaller subset of basic verbs show this pairing, with a larger set of intransitive verbs using a historically causative suffix to derive a transitive pair.[6] Thus in Hindi-Urdu and Marathi, for example, it may be reasonable to treat 'causative' suffixation as functionally equivalent to, or at least overlapping with, intransitive-transitive stem alternations; whether these alternations should be treated as transitivity or causative alternations is another question, about which we make no claims here. In Siraiki, on the other hand, there is a clear functional difference between transitive alternations and causativization.[7] Although transitivity alternation such as those in (5)–(8) will be relevant in the following discussion, then, they do not fall under our definition of causative constructions in Siraiki.

3 Causative alternations: introduction

We understand causativization as a valence or meaning changing morphosemantic or syntactosemantic operation which involves the augmentation of the argument frame of a predicate with a participant having the semantic role of *Causer*. This Causer, or agent of causation, is usually distinct from the arguments of the base predicate, meaning that causativization involves an increase in valence, but it is also possible for the role of Causer to be superimposed on one of the pre-existing arguments of the base predicate. Causativization also involves the superimposition of a role of *Causee* on one of the pre-existing arguments of the predicate.

There are several mechanisms by which languages express causation. In his typological survey, Dixon (2000) distinguishes lexical, morphological, analytic, and periphrastic causatives. Lexical causatives involve a transitivity alternation between two lexically distinct verbs, one intransitive, one transitive, which have complementary semantics. Such transitivity alternations play a key role in the Siraiki verbal system, as discussed above, but as we show below these are grammatically distinct from causativization in Siraiki.

Morphological causatives are formed by a productive morphological process. This is the primary mechanism for expressing causation in Siraiki: the suffixes are *-āv*, *-vāv*, and *-āl*. The distribution of these suffixes is complicated, and is one of the main objects of investigation in this paper. Some verbs form causatives with all three suffixes, e.g. from *sikʰ-* 'learn' can be formed *sikʰāv-* 'make *x* learn', *sikʰavāv-* 'cause *x* to make *y* learn', *sikʰāl-* 'teach'. *-āl* is restricted in distribution, however, and occurs with relatively few verbs. Most verbs can form causatives with both *-āv* and *-vāv* and, as discussed below, some verbs can form causatives in *-vāv* to both transitive and intransitive stems.

Analytic causatives involve two verb forms, one lexical verb and one causative 'light' verb,

[6]The system of pairing intransitive and transitive verb stems is also considerably less structured and extensive in Panjabi than it is in Siraiki; this constitutes one of the significant differences between the Panjabi and Siraiki verb systems. In Sindhi, it is even more extensive than in Siraiki.

[7]But see also the discussion of *baṇāvaṇ* below (27b).

which together carry out a joint predication; this type of causative is not found in Siraiki. The periphrastic causative type is similar to the analytic type in having more than one verb, but differs from it in that the two verbs head separate clauses and make separate predications. This is the only type of causative found in English (e.g. *He made the tree fall*). As we discuss below, Siraiki has a periphrastic construction that can be used to express causativization.

4 The 'primary causative' in *-āv*

The suffix *-āv* is used to form what is called the 'primary causative'. This suffix has the widest range of cognates in other modern Indo-Aryan languages, e.g. Hindi-Urdu *-ā*, Sindhi *-ā*, Panjabi *-āu*, Rajasthani and Gujarati *-āv*, Marathi *-av*, Kashmiri *-(in/ir)āv*, and is historically the oldest of the three causative suffixes in Siraiki, deriving directly from early Middle Indo-Aryan (MIA) *-āpe-/-āve-* (Edgerton 1946).

4.1 Attachment to intransitive verbs

Siraiki *-āv* is primarily attached to intransitive stems, both to those verbs which are intransitive only, lacking a transitive pair (15a–b), and to intransitive stems which stand in opposition to a transitive stem (15c–e).

(15) a. *bʰiṛ-* 'fight (intr.)' → *bʰiṛāv-* 'make *x* fight'
b. *čimk-* 'shine/glitter' → *čimkāv-* 'make *x* shine/glitter'
c. *pʰas-* 'be trapped' → *pʰasāv-* 'make *x* trapped' (beside tr. *pʰāh-* 'trap')
d. *vik-* 'be sold' → *vikāv-* 'make *x* sold' (beside tr. *vēč-* 'sell')
e. *luṛʰ-* 'drift' → *luṛʰāv-* 'make *x* drift' (beside tr. *lōṛʰ-* 'set adrift')

As mentioned above, causative suffixation results in vowel reduction of the stem, meaning that in the case of stem pairs which differ in vowel only, there is a formal ambiguity; for example, *luṛʰāv-* 'make *x* drift' could in principle involve suffixation of *-āv* to either intransitive *luṛʰ-* 'drift' or transitive *lōṛʰ-* 'set adrift'. From its consistent attachment to the intransitive stems of other verb classes, however, and also from the meaning of such forms, it is evident that *-āv* attaches to the intransitive stem in such cases.

Ex. (16a) illustrates the intransitive only *bʰiṛaṇ* 'to fight'; the primary causative *bʰiṛāvaṇ* 'to make *x* fight' is illustrated in (16b).[8]

[8]The form of the causative morpheme in (16b) does not obviously reflect *-āv*: a deletion of *v* occurs in the participle, which results in the coalescence of the vowel *ā* of the causative suffix with the *ē* of the transitive imperfective morpheme *-ēnd-*, resulting in *-ænd-*. The parallel process is found with *-vāv*, as seen below. The deletion of *v* is also found in the future tense, e.g. *sə̃āval kam karæsī* 'Sanwal will make *x* do the work', but is not an exceptionless phonological process, since it does not occur in the subjunctive, e.g. *sə̃āval kam karāvē* 'Sanwal may make *x* do the work'.

(16) a. *murs* *bʰiṛᵃ-d-ē* *in*
man.DIR fight.INTR-IMPFV-M.PL be.PR.3PL
'Men fight.'

b. *gāmaṇ* *murs$\tilde{\tilde{e}}$=k$\tilde{\tilde{u}}$* *bʰiṛ-ænd-ā* *ē*
gaman.DIR man.OBL.M.PL=DAT fight.INTR-CS1.IMPFV-M.SG be.PR.3SG
'Gaman makes men fight.'

In (16b) in comparison with (16a), we see an additional Causer argument, Gaman, while the subject of the noncausative becomes an object (differentially marked with the dative clitic, since it is animate). In semantic terms, Shibatani & Pardeshi (2002) make a distinction between 'direct' and 'indirect' causation: in the former case the causer is directly and perhaps physically involved in bringing about the caused event; in the latter case the causer is not directly or physically involved, but e.g. may act on an intermediary to bring about the caused event.[9] In these terms, the *-āv* causative here implies direct causation: the Causer must be actively involved in the execution of the caused event. In contrast, as we will see below, the causative in *-vāv* generally implies indirect causation. This contrast is parallel to the contrast between the cognate *-ā* and *-vā* causatives in Hindi-Urdu (Saksena 1982), and correlates with the typology of Shibatani & Pardeshi (2002), who claim that productive causatives tend to be indirect (Siraiki *-vāv* is more productive than *-āv*).

4.2 Causative vs. transitive

As discussed above, in other Indo-Aryan languages like Hindi-Urdu and Marathi, the cognate of the Siraiki *-āv* causative is to a large extent in complementary distribution with lexical intransitive-transitive stem alternations, meaning that in general where cognates of *-āv* attach to intransitive stems to form transitive/causative stems, there is no pre-existing transitive stem alternant. But in Siraiki, since intransitive-transitive stem alternations are functionally separate from causative suffixation, it is quite possible to derive a causative to an intransitive stem alongside a pre-existing transitive stem alternant.[10] In such cases, the causative and transitive stems are semantically very close. Examples (17a) and (17b) illustrate the intransitive and transitive alternants *luṛʰ-* 'drift' and *lōṛʰ-* 'make drift'; (17c) illustrates the *-āv* causative built to the intransitive stem. In this case, since the stem alternants differ only in their vowel, the difference between transitive stem (in 17b) and intransitive stem (in 17c) is neutralized, meaning that the transitive and causative are distinguished only by the vowel in the suffix (cf. fn. 8).

(17) a. *kāṭʰy$\tilde{\tilde{ā}}$* *luṛʰᵃ-d-y$\tilde{\tilde{ā}}$* *in*
wood.DIR.F.PL drift.INTR-IMPFV-F.PL be.PR.3PL
'The wood drifts.'

[9] For earlier similar distinctions see Kholodovich (1969) and Saksena (1982); for a detailed discussion see Pardeshi (2016: 108–110, 126–132).

[10] Hook (2006: 50–51) note a couple of such instances in Kashmiri, but they do not claim that there is a semantic difference between the two transitive stems, e.g. *gal-* 'melt (intr.)' vs. *gāl-* 'melt (tr.)' and *gal-irāv-* 'melt (tr.)'.

b. *gāmaṇ kāṭʰyɑ̃̄ luṛʰ-ēnd-ā ē*
Gaman.DIR wood.DIR.F.PL set_adrift.TR-IMPFV-M.SG be.PR.3SG
'Gaman sets the wood adrift.'

c. *sɑ̃̄val kāṭʰyɑ̃̄ luṛʰ-ænd-ā ē*
Sanwal.DIR wood.DIR.F.PL drift.INTR-CS1.IMPFV-M.SG be.PR.3SG
'Sanwal makes the wood drift.'

The transitive stem in (17b) implies the direct involvement of the Agent subject. Similarly, the causative construction in (17c) implies that Sanwal is present and directly involved in causing the wood to drift. Note that it is not possible to interpret or treat the causative in (17c) as if it were causative to the transitive stem: a Causee-Agent argument (corresponding to the Agent subject of the noncausative transitive in (17b)) cannot be added:

(18) **sɑ̃̄val gāmaṇ=dē kanũ̄ kāṭʰyɑ̃̄*
Sanwal.DIR Gaman.OBL=GEN.M.SG.OBL from wood.DIR.F.PL
luṛʰ-ænd-ā ē
drift.INTR-CS1.IMPFV-M.SG be.PR.3SG
'Sanwal makes the wood drift away by Gaman.'

The transitive and causative verbs are not semantically identical, however. For example, the action performed by the subject of (17b) may not be deliberate or may lack conscious effort, and as such the sentence is compatible with the use of the adverb *niñāṇɛ̃̄*, 'unknowingly/accidentally':

(19) *gāmaṇ niñāṇɛ̃̄ kāṭʰyɑ̃̄ luṛʰ-ēnd-ā ē*
Gaman.DIR unknowingly wood.DIR.F.PL set_adrift.TR-IMPFV-M.SG be.PR.3SG
'Gaman unknowingly/accidentally sets the wood adrift.'

In contrast, with the causative in (17c), *niñāṇɛ̃̄* is impossible:

(20) **sɑ̃̄val niñāṇɛ̃̄ kāṭʰyɑ̃̄ luṛʰ-ænd-ā ē*
Sanwal.DIR unknowingly wood.DIR.F.PL set_adrift.TR-CS1.IMPFV-M.SG be.PR.3SG
'Sanwal unknowingly/accidentally sets the wood adrift.'

In contrast to the subject of the transitive verb, the subject of the causative must act intentionally and consciously. Thus causative formations in Siraiki place particular entailments on their added argument, the *Causer*, which are not found with subjects of ordinary agentive transitive verbs; specifically, Causers must act intentionally and consciously. In contrast, transitive verbal stems which stand in a paradigmatic relationship with an intransitive stem are not causatives: their subject may have the semantic role of Agent, and may therefore

be directly involved in bringing about a change of state, but they are not Causers. A defining characteristic of causative formations, then, is that they involve an argument with the semantic role of Causer.

This difference between Agents and Causers reveals itself in other ways, too. In Siraiki transitive predicates, but not causative predicates, may occur with the light verbs *ɓah-* 'sit' or *kʰaṛ-* 'stand' in what Masica calls the "affectivity construction", typically expressing regret:

(21) *ū=kũ̃* *pičč*ʰ*ẽ̃* *andāzā* *t*ʰ*yā* *ǰō* *kyā*
DEM.OBL=DAT afterwards conjecture.DIR.M.SG become.PFV.M.SG that what
kar *ɓēṭ*ʰ*ā* *hā*
do.TR-CONJ sit.PFV.M.SG be.PST.3M.SG

'He conjectured (only) afterwards what he had ended up doing.'

(22) **ū=kũ̃* *pičč*ʰ*ẽ̃* *andāzā* *t*ʰ*yā* *ǰō* *kyā*
DEM.OBL=DAT afterwards conjecture.DIR.M.SG become.PFV.M.SG that what
kar-ā *ɓēṭ*ʰ*ā* *hā*
do.TR-CS1.CONJ sit.PFV.M.SG be.PST.3M.SG

'He conjectured (only) afterwards what he had ended up having done.'

Interestingly, the same construction with a causative predicate is equally ungrammatical in Sindhi (23), but acceptable in Panjabi (24); in both languages the construction is unproblematic with transitive predicates; the grammaticality of (24) shows that the constraints on the role of Causer in Siraiki are not shared with Panjabi.

(23) **hun*^{a}*=k*ʰ*ē* *xabar*^{a} *na* *t*ʰ*yī* *hō* *č*ʰ*ā* *kār-ā-ī*
DEM.OBL=DAT news.DIR.F.SG not become.PFV.F.SG DEM.DIR what do.TR-CS1-CONJ
*veṭ*ʰ*ō* *huyō*
sit.PFV.M.SG be.PST.3M.SG

'He did not realize what he had ended up having done.' (Sindhi)

(24) *u=nũ̃* *patā* *vī* *nĩ̃* *sī* *ō* *kī*
DEM.OBL=ACC-DAT knowledge.DIR too not be.PST.3SG DEM.DIR what
kar-ā *baiṭ*ʰ*ā*
do.TR-CS1.CONJ sit.PFV.3SG

'He did not even know what he had ended up having done.' (Panjabi)

Transitive and causative stems are similarly distinguished by their ability/inability to appear in a construction with the verb 'go' which indicates spontaneity: e.g. *ō mōyā ɠyā ē* 'he died spontaneously' (from intransitive *mar-* 'die'); *ō mārī ɠyā ē* 'he killed spontaneously(/without personal control)' (from transitive *mār-* 'kill'); but **ō mar*^{a}*vaī ɠyā ē* 'he had killed spontaneously(/without personal control)' (from causative *mar*^{a}*vā-* 'have killed'). Likewise *ō saṛk baṇaī ɠyā ē* 'he built the road spontaneously (as if it was not expected of him)' but **ō saṛk baṇ*^{a}*vaī ɠyā ē* 'he had the road built spontaneously(/without personal control)'.

4.3 Attachment to transitives

The core and by far most frequent use of *-āv* is as a causative to intransitive stems. However, it is also found with a few transitive stems. The most widely used such causative is *karāv-*, causative to *kar-* 'do'. Examples (25a) and (25b) illustrate the suppletive intransitive-transitive pair *thīv-* 'become' and *kar-* 'do'; (25c) illustrates the causative *karāv-*. Since here *-āv* is attached to the transitive stem, the only difference between transitive and causative is, like in (17), the quality of the suffixal vowel.

(25) a. *kam* *t^hī-nd-ā* *ē*
work.DIR become.INTR-IMPFV-M.SG be.PR.3SG
'The work is done.'

b. *gāmaṇ=dā* *putr* *kam* *kar-ēnd-ā* *ē*
Gaman.OBL=GEN.M.SG.DIR son.DIR work do.TR-IMPFV-M.SG be.PR.3SG
'Gaman's son does the work.'

c. *gāmaṇ* *āp^{a}ṇē* *putr=kũ̃* *kam* *kar-ænd-ā* *ē*
Gaman.DIR own.OBL.M.SG son.OBL=DAT work do.TR-CS1.IMPFV-M.SG be.PR.3SG
'Gaman makes his son do the work.'

As with its attachment to intransitive stems, the causative (25c) differs from the noncausative to which it is built (25b) in the addition of a Causer argument; since here the causative is attached to the transitive stem, it differs more obviously from the transitive stem, in having an additional argument. The subject of the transitive stem, the agent of the 'doing', has the role of Causee superimposed on it, and this Causee-Agent is case marked as an oblique argument. The semantic entailments of the primary causative here are exactly the same as with its attachment to intransitives: the Causer acts directly, being present and involved in bringing about the completion of the work, and also acts consciously and intentionally.

As discussed further below, the general restriction of *-āv* to intransitive stems in Siraiki is an innovation: at an earlier period *-āv* was the main productive causative marker, used with transitive and intransitive stems alike. Its survival with *kar-*, one of the most frequent verbs in Siraiki (and indeed Indo-Aryan), is therefore likely to represent the perseverance of the earlier unrestricted use of *-āv* due to the frequency of this verb.[11]

The primary causative in *-āv* is also found with a few other transitive stems. For example:

(26) a. *ɗēk^h-* 'see' → *ɗik^{h}āv-* 'make *x* see' [intr. stem *ɗis-* 'appear']
b. *ap^{a}ṛ-* 'catch' → *ap^{a}ṛāv-* 'make/have *x* caught' [no intr. stem]
c. *luṭ-* 'loot/rob' → *luṭāv-* 'make/have *x* looted/robbed' [no intr. stem]
d. *ʃaṇ-* 'give birth to' → *ʃaṇāv-* 'make *x* (to be) born' [intr. *ʃaṽ-* 'be born']

[11] The direct predecessor of *karāv-* was very common already in Middle Indo-Aryan (Edgerton 1946: 97), and is attested throughout the history of Indo-Aryan, appearing e.g. in Apabhraṃśa (De Clercq 2010: 75) and in the earliest distinctively Hindi text from 1354 (Imre Bangha, p.c.).

e. *sad-* 'call' → *saɗāv-* 'have *x* called' [no intr. stem]

The causative in (26a) is parallel to *karāv-*, and again involves a highly frequent verb. Those in (26b–e) are somewhat different, and may have two readings (but see also fn. 14 for a third reading of *saɗāv-*). These causatives do not increase the valency of the stem, and in some cases (which we take to represent the older reading) change the semantic role of the subject from direct Agent to indirect Causer. It is not possible with these stems to express an intermediary Causee-Agent, although it is possible to infer that such a participant, distinct from the Causer, exists. These causatives therefore differ from those we have seen above both in that they do not increase valency, and in that they imply indirect causation, not direct. Quite commonly, however, the indirect reading is weakened, resulting in a direct causative which is semantically almost indistinguishable from the transitive. So besides meaning 'have *x* called', *saɗāv-* is also commonly used as simply 'call', and likewise *faṇāv-* can mean 'give birth'.

Given that *-āv* was, at an earlier period, the primary productive causative marker, deriving causatives to both intransitive and transitive verbs, we predict that the original function of these causatives would have been parallel to *karāv-* and *ɗĩkʰāv-*, i.e. standard valency increasing causatives to transitive stems. With such causatives, when the Causee-Agent is clear in the context, or is non-specific, it can be omitted. We assume that the increasing restriction of *-āv* to intransitive stems, and the consequent increasingly consistent bivalency of *-āv* causatives, led to the optional omission of the Causee-Agent with these originally trivalent causatives becoming obligatory, resulting in indirect, bivalent, causatives.[12] A subsequent development is the loss of the indirect reading (since *-āv* is otherwise distinctively direct, contrasting with indirect *-vāv*), resulting in morphological causatives which are largely identical in function to the transitive stems on which they are based.[13] More commonly, the *-āv* causative was simply lost with transitive stems, replaced by *-vāv* (as discussed in §5).

Finally, we should note that the use of *-āv* with transitive stems can vary somewhat between the different dialects of Siraiki, and also among older speakers of certain dialects. In the southern dialect from which our data is drawn, *-āv* is generally no longer associated with transitive stems, as discussed in this section, but in other dialects, instances of *-āv* as a simple causative to transitive stems (parallel to *karāv-*) can be found.[14] This attests to a replacement of *-āv* with *-vāv* as causative marker with transitive stems, which appears to be most extensively carried through in southern Siraiki, though not yet as fully in others.

[12]The optional omission of the Causee-Agent may also underlie the loss of causativity and valency decrease attested with the original Indo-Aryan causative suffix *-áya* (with vowel strengthening in the root), where already in Sanskrit, and more regularly in Middle Indo-Aryan, original causatives like *kārayati* 'makes *x* do' become transitives like *kārayati* 'has done, does' (Edgerton 1946: 94–95). It is this Old Indo-Aryan causative which underlies the transitive stem pairs in vowel alternation with intransitive pairs.

[13]Although their morphological basis is different, these therefore align functionally with the more widespread *luṛʰāv-* type in forming a direct, bivalent causative which is distinguished from the transitive stem only in the semantic role of the subject.

[14]For example, beside the uses given in the preceding paragraphs, some speakers in northern dialect can use *saɗāv-* also as a simple causative to the transitive *sad-*, i.e. meaning 'make *x* call *y*'. Likewise, among older speakers in central and even some in southern varieties *luṛʰāv-*, which we treat above as unambiguously a causative to the intransitive stem, may occur as a causative to the transitive stem, meaning 'make *x* set *y* adrift'.

4.4 A noncausative instance of *-āv*

As discussed above, in several better studied Indo-Aryan languages, the cognate of Siraiki *-āv* functionally overlaps with transitive stem alternants, supplying transitive (and perhaps causative) stems for many intransitive verbs which lack a lexical transitive alternant. This is not generally the case in Siraiki, where the system of lexical intransitive-transitive stem alternants is significantly more comprehensive, covering the vast majority of verbs in the language. As noted, a few verbs in Siraiki, both transitive and intransitive, lack lexical alternants; in the case of intransitive only verbs, a derivative in *-āv* can be formed, but such derivatives are causatives, not transitives.[15]

There are rare exceptions, however. The primary causative of the intransitive only verb *baṇaṇ* 'to be built' (27a), i.e. *baṇāvaṇ* (27b), deviates from the productive use of *-āv* with other intransitive stems.

(27) a. *saṛkɑ̃̄* *baṇ^{a}-d-yɑ̃̄* *in*
road.DIR.F.PL be_built.INTR-IMPFV-F.PL be.PR.3PL
'Roads are built.'

b. *gāmaṇ* *saṛkɑ̃̄* *baṇ-ǣnd-ā* *ē*
gaman.DIR road.DIR.M.PL be_built.INTR-CS1.IMPFV-M.SG be.PR.3SG
'Gaman builds roads.'

Although morphologically a causative rather than a transitive, *baṇāvaṇ* functions syntactically and semantically as an ordinary transitive verb. Specifically, Gaman in (27b) is interpreted as an Agent, not as a Causer. This is supported by the adverb test in (28), contrasting with the otherwise parallel *b^{h}iṛāvaṇ* in (29).

(28) *gāmaṇ* *niñāṇɛ̃̄* *(sidd^{h}-yɑ̃̄* *puṭṭ^{h}-yɑ̃̄)* *saṛkɑ̃̄*
gaman.DIR unknowingly (straight-DIR.F.PL opposite-DIR.F.PL) road.DIR.F.PL
baṇ-ǣnd-ā *ē*
be_built.INTR-CS1.IMPFV-M.SG be.PR.3SG
'Gaman unknowingly/accidentally builds (disorderly) roads.'

(29) **gāmaṇ* *niñāṇɛ̃̄* *mursɛ̃̄=kũ̄* *b^{h}iṛ-ǣnd-ā* *ē*
gaman.DIR unknowingly man.OBL.M.PLDAT fight.INTR-CS1.IMPFV-M.SG be.PR.3SG
'Gaman unknowingly/accidentally makes men fight.'

As shown in (28), Gaman's action of building the roads can be modified by *niñāṇɛ̃̄*, but this is not the case with the causative in (29). Both *b^{h}iṛaṇ* and *baṇaṇ* are intransitive only, so the verbs are otherwise parallel, but the contrast between (29) and (28) shows that *baṇāvaṇ* does not behave as a standard causative. It is clear that the innovative function is that seen in

[15] Distinguishable by the adverb test, etc.

baṇāvaṇ. Both *baṇaṇ* and *baṇāvaṇ* are high frequency verbs which have uses both as lexical and light verbs; it seems possible that the more functional light verb use encouraged the semantic bleaching of the causative and paradigmatic realignment of causative as transitive. At any rate, this rare development in Siraiki parallels the far more common assimilation in other modern Indo-Aryan languages of causative suffixation with (what are in Siraiki, at least) transitive alternations, and suggests that in this respect at least, Siraiki is more conservative in showing this assimilation so infrequently.[16]

It is interesting to note that the historical development of causative stem to noncausative transitive has occurred more than once in the history of Indo-Aryan: the original old Indo-Aryan causative formation in *-áya* lost its causative functionality in middle Indo-Aryan (replaced by the predecessor of *-āv*), and is in fact the origin of the transitive stem variants with vowel alternation in modern Indo-Aryan languages.

5 The 'double' causative *-vāv*

The 'double' causative suffix *-vāv* is the most productive of the causative suffixes in Siraiki. We saw in the previous section that *-āv* is largely restricted to intransitive stems, and correspondingly *-vāv* is primarily found with transitive stems. It is also used with some intransitive stems, however, and diachronically the use of *-vāv* appears to be extending at the expense of *-āv*.[17]

Historically, *-vāv* represents the coalescence of two instances of *-āv*: *-āv*+*-āv* with loss of the first syllable due to stress shift. It thus originally represented a 'double' causative or causative of causative. In rare cases *-vāv* retains this function in Siraiki, but in the majority of its uses it is now a simple causative, equivalent in function (though not in distribution) to *-āv*.

Cognate and parallel formations are found in several other Indo-Aryan languages. Hindi-Urdu *-vā* and Panjabi *-vāu* are direct cognates of Siraiki *-vāv*. In Gujarati (Mistry 1969) there are a variety of simple causatives, e.g. *-av*, *-ḍav*, and *-aḍ*, and these combine to form double causatives, e.g.: *kər-* 'do', *kər-av-* 'make do', *kər-av-ḍav-* 'cause to make do'; *bes-* 'sit', *bes-aḍ-* 'seat', *bes-aḍ-av-* 'make seat'. Kashmiri also attests multiply marked causatives (Hook 2006: 57–59). Such 'double' causatives in these languages do not necessarily have a double causative function. In other Indo-Aryan languages, including Marathi and Sindhi, there is no morphologically double causative marker.[18]

[16] A slightly different development is seen in transitive stems like *pʰirāv-* 'whirl', where a semantic development in the meaning of the original causative has resulted in its paradigmatic dissociation from its base (*pʰir-* 'turn (intr.)', with transitive *pʰēr-* 'turn') and consequent loss of causative sense. Stems like these are noted by Shackle (1976: 75).

[17] Shackle (1976: 75–76) notes a number of examples of *-āv* with transitive verbs where we find only *-vāv* acceptable, e.g. *gʻulāv-* 'make found' instead of *gʻulᵃvāv-* from *gʻōl-* 'find', and *bʰiʃāv-* 'cause to send' instead of *bʰiʃᵃvāv-* from *bʰēʃ-* 'send'. These differences may be attributable to either/both dialectal variation and/or language change, but certainly correlate with the increasing restriction of *-āv* to intransitive stems.

[18] Some earlier authors do claim double causatives for both Marathi and Sindhi, e.g. Damle (1911) and Grierson (1919) respectively, but we know of no evidence for their use in modern speech (for Marathi see Pardeshi 2016: 102–104).

5.1 Double causative function

With transitive verbs like *karaṇ* 'to do', which exceptionally admit causatives in *-āv*, the causative in *-vāv* functions as a double causative. For example, beside the transitive and causative stems of *karaṇ* given in (25b–c), repeated as (30a–b), we find the double causative in (30c):

(30) a. *gāmaṇ=dā putr kam kar-ēnd-ā ē*
Gaman.OBL=GEN.M.SG.DIR son.DIR work do.TR-IMPFV-M.SG be.PR.3SG
'Gaman's son does the work.'

b. *gāmaṇ āpᵃṇē putr=kū̃ kam kar-ænd-ā ē*
Gaman.DIR own.OBL.M.SG son.OBL=DAT work do.TR-CS1.IMPFV-M.SG be.PR.3SG
'Gaman makes his son do the work.'

c. *sā̃val gāmaṇ=dē kanū̃ ũ̃=dē*
Sanwal.DIR Gaman.OBL=GEN.M.SG.OBL from DEM.OBL=GEN.M.SG.OBL
putr=kū̃ kam karᵃ-vænd-ā ē
son.OBL=DAT work do.TR-CS2.IMPFV-M.SG be.PR.3SG
'Sanwal makes Gaman make his (Gaman's) son do the work.'

In comparison with (30b), the double causative *karᵃvāv-* involves the addition of a new Causer subject argument, while the Causer subject of the primary causative has the role of Causee superimposed, and this Causee-Causer is realised as an oblique argument. The object of the transitive verb, *putr* 'son', which was the Causee-Agent, and oblique argument, of the primary causative, retains this role in the double causative, and the primary object *kam* 'work' retains its role with all three verb forms.

We find the same use of *-vāv* when attached to intransitive stems like *bhiraṇ* 'to fight' and *baṇaṇ* 'to be built', which also form *-āv* causatives:

(31) *sā̃val gāmaṇ=dē kanū̃ mursẽ̃=kū̃*
sanwal.DIR gaman.OBL=GEN.M.SG.OBL from man.OBL.M.PL=DAT
bʰiṛᵃ-vænd-ā ē
fight.INTR-CS2.IMPFV-M.SG be.PR.3SG
'Sanwal makes Gaman make the men fight.'

(32) *sā̃val gāmaṇ=dē kanū̃ saṛkā̃*
sanwal.DIR gaman.OBL=GEN.M.SG.OBL from road.DIR.F.PL
baṇᵃ-vænd-ā ē
be_built.INTR-CS2.IMPFV-M.SG be.PR.3SG
'Sanwal makes Gaman build the roads.'

In §4.4 we noted the difference between the primary (*-āv*) causatives of *bhiraṇ* 'to fight' and *banaṇ* 'to be built': the former is, functionally as well as formally, a causative, while the latter is formally a causative but functions as a plain transitive. In both cases, however, *-vāv* attached to the root derives a causative to the *-āv* stem.

In all these cases it seems reasonable to treat *-vāv* in accordance with its origin: *-vāv* represents *-āv*+*-āv*, and thus derives causatives to stems in *-āv* which are, usually, themselves causative. Its apparent double causative function depends on the existence of a corresponding *-āv* stem; that *-vāv* is not in itself a double causative is clear from the fact that it derives a causative to a transitive in the case of *baṇ*^{a}*-vāv-*.

5.2 Single causative to transitive stems

In most cases, however, *-vāv* cannot be treated as representing *-āv*+*-āv*, but must be a simple causative to noncausative stems. For example, in the case of intransitive-transitive verb pairs which are distinguished by consonant alternations, *-vāv* attaches to the transitive stem to form a simple causative.[19]

(33) a. *miṭṭī* *ḍ*^{h}*uk*^{a}*-d-ī* *ē*
soil.DIR.F.SG be_carried.INTR-IMPFV-F.SG be.PR.3SG
'The soil is carried.'

b. *gāmaṇ* *miṭṭī* *ḍ*^{h}*uh-ēnd-ā* *ē*
gaman.DIR soil.DIR.F.SG carry.TR-IMPFV-M.SG be.PR.3SG
'Gaman carries the soil.'

c. *sə̃āval* *gāmaṇ=dē* *kanũ* *miṭṭī*
sanwal.DIR gaman.OBL=GEN.M.SG.OBL from soil.DIR.F.SG
ḍ^{h}*uh*^{a}*-vænd-ā* *ē*
carry.TR-CS2.IMPFV-M.SG be.PR.3SG
'Sanwal makes Gaman carry the soil.'

Examples (33a–b) illustrate the intransitive stem *ḍ*^{h}*uk-* 'be carried' and the transitive stem *ḍ*^{h}*ōh-* 'carry'. The *-vāv* causative in (33c) is evidently a simple causative to the transitive stem *ḍ*^{h}*ōh-*; it cannot be a double causative to the intransitive stem (since the final consonant of the stem is different), and cannot be a causative to a stem *ḍ*^{h}*uhāv-*, since this does not occur.[20]

[19] Notice that the case marking of the intermediary Causee-Agent here is different from the marking of the Causee-Agent with *-āv*, and identical with that of the Causee-Causer in the double causative use of *-vāv* (e.g. 30c). That is, in all its uses, the Causee of *-vāv* is marked with *=dē kanũ*, while the Causee of *-āv* is marked with the dative *=kũ*. We take this to be a purely formal distinction conditioned by the morphemes involved: it does not necessarily indicate any difference in semantic role of the Causee; with the double causative, where *-vāv* originated, of course there is a difference, the one being a Causee-Causer, the other being Causee-Agent, but as a single causative we find no necessary difference between the Causee of *-vāv* and the Causee of *-āv*.

[20] At least, *ḍ*^{h}*uhāv-* does not occur as an independent verbal stem. A few such *-āv* causatives to transitive stems, which have otherwise been replaced by *-vāv* causatives, marginally survive in certain constructions such as polite imperatives with the light verb *g*^{h}*in*, e.g. *miṭṭī ḍ*^{h}*uhā g*^{h}*in-* '(help) carry the soil please!'; such survivals reflect an older period in which *-āv* was the regular causative marker with both transitive and intransitive verbs.

The same pattern is seen in the following examples, with the stems *d^{h}ōp-* 'be washed', *d^{h}ōv-* 'wash', and *d^{h}u(v^a)-vāv-* 'make wash':[21]

(34) a. *kap^{a}ṛē* *d^{h}op^a-d-ē* *in*
cloth.DIR.M.PL be_washed.INTR-IMPFV-M.PL be.PR.3PL
'The clothes are washed.'

b. *gāmaṇ=dī* *zāl* *kap^{a}ṛē* *d^{h}u(v)-ēnd-ī*
gaman.OBL=GEN.DIR.F.SG wife.DIR cloth.DIR.M.PL wash.TR-IMPFV-F.SG
ē
be.PR.3SG
'Gaman's wife washes the clothes.'

c. *gāmaṇ* *zāl=dē* *kanũ̃* *kap^{a}ṛē*
gaman.DIR wife.OBL=GEN.OBL.M.SG from cloth.DIR.M.PL
d^{h}u(v^a)-vænd-ā *ē*
wash.TR-CS2.IMPFV-M.SG be.PR.3SG
'Gaman makes his wife wash the clothes.'

Once again, *-vāv* here attaches to a transitive stem with apparently simple causative value. In this case, the form cannot be analysed as a double causative to an intransitive stem, since the intransitive stem is *d^{h}ōp-*, not *d^{h}ōv-*; nor can it be analysed as a causative applying to an *-āv* causative since a. such a causative does not exist, and b. if an *-āv* causative to the transitive stem *d^{h}ōv-* did exist, we would expect that to mean 'make *x* wash *y*', meaning that the *-vāv* causative ought to mean 'make *x* make *y* wash *z*'. Rather, we are evidently dealing with a simple causative to the transitive stem.

Since *-vāv* is, historically, a double causative formation *-āv+-āv*, it is clear that the simple causative use of *-vāv* is a secondary development. The origins of this development may lie in its use with intransitive-transitive stem pairs which differ only in vowel quality. In these stems, as we have seen, causative suffixation results in vowel reduction in the stem which neutralizes the difference between transitive and intransitive stems. As discussed in §4.2, the *-āv* causative to *luṛ^h-/lōṛ^h-* 'drift'/'set adrift' is clearly the causative to the intransitive stem; the *-vāv* causative involves an additional argument:

(35) a. *kāṭ^{h}yə̃* *luṛ^{ha}-d-yə̃* *in*
wood.DIR.F.PL drift.INTR-IMPFV-F.PL be.PR.3PL
'The wood drift.'

b. *gāmaṇ* *kāṭ^{h}yə̃* *luṛ^h-ēnd-ā* *ē*
Gaman.DIR wood.DIR.F.PL set_adrift.TR-IMPFV-M.SG be.PR.3SG
'Gaman sets the wood adrift.'

[21] Note that vowel reduction in the transitive stem here results in a stem *d^{h}u(v)-*, with the /v/ optionally deleted following the /u/. When followed by *-vāv*, deletion of the /v/ could leave it ambiguous whether we are dealing with *d^{h}u-vāv-* or *d^{h}uv-āv-*; alternate forms with retained /v/, i.e. *d^{h}uv^a-vāv-*, and the general restriction of *-āv* to intransitive stems, demonstrates that the former analysis is correct. The optional deletion of *v* is also found in the future tense, e.g. *d^{h}uēsī* '(he/she/it) will wash', but is not found in the subjunctive *d^{h}ōvē* '(he/she/it) may wash'; compare the observations on /v/ deletion in fn. 16.

c. *sə̃āval* *kāṭʰyə̃ā* *luṛʰ-ænd-ā* *ē*
Sanwal.DIR wood.DIR.F.PL drift.INTR-CS1.IMPFV-M.SG be.PR.3SG
'Sanwal makes the wood drift.'

d. *sə̃āval* *gāmaṇ=dē* *kanũ̃* *kāṭʰyə̃ā*
Sanwal.DIR Gaman.OBL=GEN.OBL.M.SG from wood.DIR.F.PL
luṛʰa-vænd-ā *ē*
set_adrift.TR-CS2.IMPFV-M.SG be.PR.3SG
'Sanwal makes Gaman set the wood adrift.'

As discussed above, (35b) and (35c) are almost identical in argument structure terms, differing only in the additional entailments placed on the Causer argument of the causative as against the Agent of the transitive. This means that the *-vāv* causative in (35d) is ambiguous: it could conceivably be a causative to the causative stem *luṛʰāv-*, or it could be a causative to the transitive stem *lōṛʰ-*. In origin it is clearly the former, but a reanalysis as the latter would have licensed the extension of *-vāv* as a simple causative to other transitive stems.[22]

5.3 *-vāv* causatives to intransitives

Alongside the triplets of intransitive, transitive, and transitive+*-vāv* stems in (33) and (34) above, it is also sometimes possible to form *-vāv* causatives to the corresponding intransitive stems of such verbs:

(36) *sə̃āval* *miṭṭī* *ḍʰuka-vænd-ā* *ē*
sanwal.DIR soil.DIR.F.SG be_carried.INTR-CS2.IMPFV-M.SG be.PR.3SG
'Sanwal has the soil carried.'

(37) *gāmaṇ* *kapa ṛē* *ḍʰupa-vænd-ā* *ē*
gaman.DIR cloth.DIR.M.PL be_washed.INTR-CS2.IMPFV-M.SG be.PR.3SG
'Gaman has the clothes washed.'

For these intransitive stems, no primary causative, i.e. **ḍʰukāv-* or **ḍʰupāv-*, exists. The *-vāv* causative is semantically more distinct from the corresponding transitives (33b and 34b) than are the *-āv* causatives to intransitive stems such as *luṛʰāv-* (§4.2). Crucially, the causation in (36) and (37) is indirect: Sanwal does not carry the soil himself, nor does Gaman wash the clothes himself, but they bring about the carrying/washing via an unexpressed intermediary. This is still a simple, not a double causative, however: the causative increases the valency of the base intransitive stem by one, not two; it is ungrammatical to explicitly add a Causee-Agent:

[22] Although it is possible using the tests discussed above to distinguish the semantic role of the subject of the sentence, and hence whether *luṛʰāv-* is a transitive or causative stem, we know of no tests which permit us to distinguish the role of the Causee, i.e. whether we are dealing with a Causee-Causer (if *-vāv* represents a causative to the *-āv* causative) or a Causee-Agent (if *-vāv* is a simple causative to the transitive stem). Presumably this inability to distinguish the two facilitated the reanalysis of the former as the latter.

(38) *sə̃āval gāmaṇ=dē kanū̃ miṭṭī
sanwal.DIR gaman.OBL=GEN.M.SG.OBL from soil.DIR.F.SG
ḍʰukᵃ-vænd-ā ē
be_carried.INTR-CS2.IMPFV-M.SG be.PR.3SG

'Sanwal has the soil carried by Gaman.'

(39) *gāmaṇ zāl=dē kanū̃ kapᵃṛē
gaman.DIR wife.OBL=GEN.OBL.M.SG from cloth.DIR.M.PL
dʰupᵃ-vænd-ā ē
be$_w$ashed.INTR-CS2.IMPFV-M.SG be.PR.3SG

'Gaman has his wife wash the clothes.'

Rarely, a causative in *-vāv* to an intransitive stem may also be encountered alongside an existing causative in *-āv*. So beside *pʰasāv-* 'make *x* trapped', given in (15c), there also occurs *pʰasᵃvāv-* 'make *x* have *y* trapped', in addition to the expected *pʰahᵃvāv-*. Here we may be dealing with an analogical restoration of the historically prior /s/ which survives in the intransitive stem, but became /h/ through regular sound change in the transitive stem.[23]

5.4 *-vāv* as an indirect causative

Whereas *-āv*, in the majority of its uses, implies direct causation, *-vāv* is consistently associated with indirect, mediated causation. While in (16b) and (17c) Gaman and Sanwal must be directly involved in bringing about the caused event, in e.g. (30c) and (35d) the Causer subjects are by default interpreted as not present and not directly involved in bringing about the caused event. Causation with *-vāv* is indirect and mediated even when no intermediary Causee can be expressed, as in (36) and (37).

The distinction between direct *-āv* and indirect *-vāv* is very close to the primary distinction between *-ā* and *-vā* in Hindi-Urdu, as discussed in detail by Saksena (1982). In Hindi-Urdu, *-vā* can be used to form a causative to a stem in *-ā*, particularly when that stem is itself transitive, rather than causative. But it can also function as an indirect causative with identical valency to a corresponding *-ā* causative, for example:

(40) a. *maĩ-ne laṛke-ko dauṛ-vā-yā*
I-ERG boy.OBL-DAT run-CS2-PFV.M
'I had the boy run.'

b. *maĩ-ne laṛke-ko dauṛ-ā-yā*
I-ERG boy.OBL-DAT run-CS1-PFV.M
'I chased the boy.'

[23]Contamination between transitive and intransitive stems ending in *s/h* may also be seen in the causative forms of *kus-* 'be slain' — *kōh-* 'slay': primary causative *kuhāv-* and double causative *kuhᵃvāv-*, generalizing in the opposite direction from *pʰas-*—*pʰāh-*, although here a form like **kusāv-* remains unattested.

In both languages, this distinction likely derives from the double causative origin of *-vāv/-vā*, since in the double causative there is necessarily an intermediary Causee-Causer between the main Causer and the caused event. But in both languages it has been extended to the simple causatives uses of the suffix.

In Hindi-Urdu, the direct/indirect distinction appears to be a central aspect of the causative system, accounting in large part for the distinction between *-ā* and *-vā*. The situation is somewhat different in Siraiki, where the primary distributional difference between *-āv* and *-vāv* is to do with the transitivity of the stem to which the suffix attaches. In §4.3, we presented examples of *-āv* causatives to transitive stems, where the causation is indirect. These can be explained by the very same process which underlies the indirect reading of *-vāv*, namely a reduction in valency of the causative suffix in these forms, the intermediary Causee-Agent being eliminated. In Siraiki therefore, the direct-indirect distinction between *-āv* and *-vāv* is a tendency only.

5.5 Summary

The *-vāv* causative is the most productive, but also the most complex of the causative formations in Siraiki. In this it fits the typology of secondary causative formations perfectly: according to Kulikov (1993), "second causatives" are morphologically and semantically more complex, more productive, and more regular, than primary causative formations.

The most productive use of *-vāv* is as an indirect causative, mainly to transitive stems but increasingly to intransitive stems too. It has been, and is still, observably expanding its range at the expense of *-āv*; with older speakers using more *-āv* causatives with transitive stems, and certain idiomatic constructions preserving *-āv* causatives which have otherwise been replaced by *-vāv*. It seems clear that at an earlier period *-āv* was the more regular and productive causative suffix, to both transitive and intransitive stems, but that the expansion of *-vāv* is increasingly marginalizing *-āv*.

In some cases, however, *-vāv* retains its older function as a double causative alongside a single causative in *-āv*. This raises an interesting and not immediately answerable question as to whether we are dealing with one *-vāv* or two. Kulikov (1993: 126) discusses the phenomenon of double affix reduction, where one of two causative morphemes in a double construction may be optionally or obligatorily deleted. If we admit double affix reduction for Siraiki, it might be possible to treat double causative uses of *-vāv* as underlyingly instances of double affixation, *-āv-vāv*, with the first affix obligatorily deleted. Alternatively, we must admit two versions of *-vāv*, one of which has a complex argument frame involving two degrees of causativization.

6 'L-causatives'

The third causative suffix in Siraiki is the least productive and the most lexicalized, but it occurs with a number of highly frequent verbs.[24] For example:

[24]Indeed, it is so common that it has been borrowed into the neighbouring Iranian language Balochi.

(41) a. *kʰāv-* 'eat' → *kʰavāl-* 'feed *x*'
b. *ɗēkʰ-* 'see' → *ɗikʰāl-* 'show to *x*'
c. *sikʰ-* 'learn' → *sikʰāl-* 'teach *x*'
d. *sumʰ-* 'sleep' → *sumʰāl-* 'put *x* to sleep'
e. *uṭʰ-* 'rise' → *uṭʰāl-* 'awaken *x*/make *x* get up'
f. *rōv-* 'cry' → *ruvāl-* 'make *x* cry'

Causatives formed with *-āl* imply direct causation, as with *-āv*, but are further restricted in that they can only be used with animate arguments; Causer and Causee are both typically human, and in addition there is a strong implication of agency and direct physical involvement on the part of the Causer. The verb *sumʰ-* 'sleep' forms causatives using all three suffixes; the following example illustrates the simple intransitive stem (42a), the *-āv* causative (b), and the *-āl* causative (c):

(42) a. *gāmaṇ=dē* *ɓāl* *sumʰa-d-ē* *in*
gaman.OBL=GEN.DIR.M.PL child.DIR sleep.INTR-IMPFV-M.PL be.PR.3PL
'Gaman's children (go to) sleep.'
b. *gāmaṇ* *ɓālẽ=kũ* *sumʰ-ænd-ā* *ē*
gaman.DIR child.OBL.M.PL=DAT sleep.INTR-CS1.IMPFV-M.SG be.PR.3SG
'Gaman makes (his) children (go to) sleep.'
c. *gāmaṇ* *ɓālẽ=kũ* *sumʰa-lænd-ā* *ē*
gaman.DIR child.OBL.M.PL=DAT sleep.INTR-CS3.IMPFV-M.SG be.PR.3SG
'Gaman puts his children to sleep.'

Syntactically *-āv* and *-al* are very similar here, adding a Causer argument and assigning the same case to the Causee. The difference between the two is semantic: (42c) necessarily implies that Gaman is physically involved in putting his children to sleep (tucking them in, etc.), whereas (42b) is compatible with a directive interpretation in which Gaman merely instructs his children such that they go to sleep (though it is also compatible with the physical involvement reading).

The direct and physical agency of the Causer in the *-āl* causative may give the impression that this is closer to a transitive construction than a true causative, and the glosses of some of the *-āl* stems given in (41), e.g. 'feed', 'show', 'teach', may give the same impression. However, with all such stems, the tests discussed in §4.2 suggests that we are dealing with true causatives: for example, it is ungrammatical to use an adverb like *niñāṇẽ* with an *-āl* causative.

(43) **gāmaṇ* *ɓālẽ=kũ* *niñāṇẽ* *sumʰa-lænd-ā* *ē*
gaman.DIR child.OBL.M.PL=DAT unknowingly sleep.INTR-CS3.IMPFV-M.SG be.PR.3SG
'Gaman unknowingly/accidentally puts his children to sleep.'

Given the requirement for animacy and physical involvement, we might say that the added argument of the *-āl* causative is a Causer-Agent, as opposed to the Causer of *-āv* and *-vāv*; yet all three necessarily involve Causers.

There is a further, morphological argument in favour of the causative status of *-āl*. The attentive reader may have noticed that the form of the *-āl* causative given in (42) is *sum^{ha}lændā*, with the vowel /ǣ/, rather than **sum^{ha}lēndā*, which is what we would expect, taking the morpheme *-āl* and suffixing the transitive marker *-ēnd*. The future form, e.g. *sum^{ha}-lǣ-sī* '(he/she/it) will put *x* to sleep', also shows this distinctively causative vowel. One way to explain the /ǣ/ vowel in these forms would be to assume that we are really dealing with a complex suffix *-āl-āv*; however, the subjunctive (*sum^{h}ālē* '(he/she/it) may put *x* to sleep'), perfective (*sum^{h}ālyā* 'put *x* to sleep'), and infinitive (*sum^{h}ālaṇ*), show no sign of a suffixed *-āv*, but attest simply *-āl*. The best explanation is therefore that the /ǣ/ vowel of forms like *sum^{ha}lændā* is analogical on that of *-āv* and *-vāv* causatives; in other words, *-ænd*, which as discussed above was originally the result of contraction of *-āv*+*-ēnd*, has been reanalysed as a 'causative' version of the transitive imperfective suffix *-ēnd*, and has been analogically transferred also to causatives in *-āl* where there was never any contraction.[25]

As noted, *sum^{h}-* 'sleep' forms causatives using all three suffixes. Forms with *-āv* and *-āl* were illustrated above; the following example illustrates the *-vāv* causative:

(44) *gāmaṇ ɓālẽ̃=kũ̃ zāl=dē kanũ̃*
gaman.DIR child.OBL.M.PL=DAT wife.OBL=GEN.OBL.M.SG from
sum^{ha}-vænd-ā ē
sleep.INTR-CS2.IMPFV-M.SG be.PR.3SG
'Gaman makes his wife put his children to sleep.'

Here, *-vāv* is attached to an intransitive stem, but functions as a double causative, i.e. causative to (42b). In certain forms, it is even possible to form a complex causative by suffixing *-vāv* to the *-āl* causative: e.g. the imperatives *sum^{ha}l^{a}vaō* 'make *x* put to sleep!' or *sik^{ha}l^{a}vaō* 'make *x* to be taught!'. Such formations are rare, likely due to a phonological restriction on word length in Siraiki: words more than three syllables long are in general prohibited.[26] The meaning of these forms suggests that the *-vāv* suffixation functions to derive an indirect version of the *-āl* causative.

[25]Interaction between the cognates of *-āl* and *-āv* is also found in some other modern Indo-Aryan languages. The Panjabi imperfective corresponding to *sum^{ha}lændā* is *su-lāund-ā*, and this *-āl-āu* has been generalized further than the /ǣ/ of Siraiki, being found even in the infinitive (*sulāuṇā* 'to put to sleep'). Hindi-Urdu *-lā* may likewise reflect *-(ā)l*+*-ā*. The Gujarati causative suffixes *-aḍ* and *-ḍav*, mentioned in §5, are the morphological equivalents of *-āl* and *-āl-āv* respectively, although their synchronic relation in Gujarati is no longer clear. In Sindhi, there is no interference from *-āv* in forms of the *-ār* causative; e.g. the equivalent of *sum^{ha}lændā* is *sum^{h}-ārīnd-ō*, where *-īnd* is the standard transitive imperfective suffix in Sindhi, equivalent of Siraiki *-ēnd*.

[26]And the imperative forms given are likely contractions of **sum^{ha}l^{a}vāvō* and **sik^{ha}l^{a}vāvō* respectively.

7 Periphrastic pseudo-causative

Besides the three morphological causatives discussed in the preceding sections, Siraiki attests a periphrastic construction that may be most accurately described as pseudo-causative. This periphrastic construction is formed using either *kʰaṛāvaṇ* 'to make stand' or *lāvaṇ* 'to attach' as verb of causation, governing a lexical verb which appears in the (oblique) infinitive form governed by the locative marking clitic. The verb *kʰaṛāvaṇ* is the causative of the verb *kʰaṛaṇ* 'to stand' formed with *-āv*. The verb *lāvaṇ* is historically derived from the intransitive verb *laɠɠaṇ* 'to be attached' by the *-āv* causative suffix, but synchronically *lāvaṇ* behaves like a transitive verb.

The transitive verb *dʰōv-* 'wash' is illustrated in (45a); this verb forms a causative in *-vāv* (45b), and also permits the periphrastic construction with both *lāvaṇ* (46a) and *kʰaṛāvaṇ* (46b).

(45) a. *gāmaṇ=dī* *zāl* *kapᵃṛē* *dʰu(v)-ēnd-ī*
gaman.OBL=GEN.DIR.F.SG wife.DIR cloth.DIR.M.PL wash.TR-IMPFV-F.SG
ē
be.PR.3SG
'Gaman's wife washes the clothes.'

b. *gāmaṇ* *zāl=dē* *kanũ̃* *kapᵃṛē*
gaman.DIR wife.OBL=GEN.OBL.M.SG from cloth.DIR.M.PL
dʰu(vᵃ)-vænd-ā *ē*
wash.TR-CS2.IMPFV-M.SG be.PR.3SG
'Gaman makes his wife wash the clothes.'

(46) a. *gāmaṇ* *zāl=kũ̃* *kapᵃṛē* *dʰōv-aṇ=tẽ̃*
gaman.DIR wife.OBL=DAT cloth.DIR.M.PL wash.TR-INF.OBL=LOC
l-ænd-ā *ē*
be_attached.INTR-CS1.IMPFV-M.SG be.PR.3SG
'Gaman causes/forces his wife to wash the clothes.'

b. *gāmaṇ* *zāl=kũ̃* *kapᵃṛē* *dʰōv-aṇ=tẽ̃*
gaman.DIR wife.OBL=DAT cloth.DIR.M.PL wash.TR-INF.OBL=LOC
kʰaṛ-ænd-ā *ē*
stand.INTR-CS1.IMPFV-M.SG be.PR.3SG
'Gaman causes/forces his wife to wash the clothes.'

The periphrastic pseudo-causative is quite different from the causatives in the semantic entailments made of its arguments. In the periphrastic construction, the Causee is understood as being under a strong degree of compulsion, with no choice or willingness in the execution of the caused situation. The periphrastic construction with *kʰaṛāvaṇ* implies physical involvement and direct causation, while the construction with *lāvaṇ* implies indirect causation; in this, the direct causation of the former may derive from the fact that *kʰaṛāvaṇ* is itself an *-āv* (and therefore direct) causative.

Although the form of this construction corresponds fully to the productive rules of Siraiki syntax, it is not productive but highly restricted to a very small number of verbs; it is historically a recent phenomenon in Siraiki and may be gradually spreading. Since the ordinary rules of syntax ought to be fully productive, we appear to be dealing with a construction in the technical sense, i.e. something more like an idiom, which is currently possible only with a specific set of lexical verbs. The construction with *lāvaṇ* is found with both transitive and intransitive verbs, but *kʰaṛāvaṇ* is found only with transitive verbs. The intransitive verb *druk-* 'run' is illustrated in (47a); this verb forms a simple causative in *-āv* (47b), and also forms a periphrastic construction with *lāvaṇ* (48a) but not with *kʰaṛāvaṇ* (48b).

(47) a. *gāmaṇ=dā putr druk^{a}-d-ā ē*
gaman.OBL=GEN.DIR.M.SG son.DIR run.INTR-IMPFV-M.SG be.PR.3SG
'Gaman's son runs.'

b. *gāmaṇ putr=kũ̃ dur^{a}k-ǣnd-ā ē*
gaman.DIR son.OBL=DAT run.INTR-CS1.IMPFV-M.SG be.PR.3SG
'Gaman makes (his) son run.'

(48) a. *gāmaṇ putr=kũ̃ drukk-aṇ=tẽ̃*
gaman.DIR son.OBL=DAT run.TR-INF.OBL=LOC
l-ǣnd-ā ē
be_attached.INTR-CS1.IMPFV-M.SG be.PR.3SG
'Gaman causes/forces (his) son to run.'

b. **gāmaṇ putr=kũ̃ drukk-aṇ=tẽ̃ kʰaṛ-ǣnd-ā*
gaman.DIR son.OBL=DAT run.TR-INF.OBL=LOC stand.INTR-CS1.IMPFV-M.SG
ē
be.PR.3SG
'Gaman causes/forces (his) son to run.'

Despite having causative semantics, this construction differs significantly from the morphological causatives discussed above, and may reasonably be described as a pseudo-causative. Most significantly, the adverb test introduced in §4.2, which otherwise unambiguously distinguishes between causative and noncausative, suggests that the construction with *lāvaṇ* is not a true causative:

(49) *gāmaṇ niñāṇẽ̃ zāl=kũ̃ kap^{a}ṛē dʰōv-aṇ=tẽ̃*
gaman.DIR unknowingly wife.OBL=DAT cloth.DIR.M.PL wash.TR-INF.OBL=LOC
l-ǣnd-ā ē
be_attached.INTR-CS1.IMPFV-M.SG be.PR.3SG
'Gaman unknowingly/accidentally causes/forces his wife to wash the clothes.'

Since *niñāṇẽ̃* is compatible with this construction, it is not clear that we can label Gaman a Causer in (49), at least in the same way as with the subjects of the morphological causatives

discussed above. In contrast, *niñāṇẽ̃* is impossible with the periphrastic construction using *kʰaṛāvaṇ*, but this may simply be because *kʰaṛāvaṇ* is itself a causative, and not because the periphrastic construction as a whole is independently a causative construction proper.

(50) **gāmaṇ niñāṇẽ̃ zāl=kũ̃ kapᵃṛē*
gaman.DIR wife.OBL=DAT cloth.DIR.M.PL wash.TR-INF.OBL=LOC
dʰōv-aṇ=tẽ̃ kʰaṛ-ænd-ā ē
stand.INTR-CS1.IMPFV-M.SG be.PR.3SG

'Gaman unknowingly/accidentally causes/forces his wife to wash the clothes.'

Unlike the morphological causatives, the periphrastic causative is biclausal. For example, it is possible to use and interpret adverbs independently in the main clause or the embedded clause. So alongside (49), the adverb can be explicitly positioned within the embedded clause, making it possible to interpret the action of Gaman's wife as performed accidentally:

(51) *gāmaṇ zāl=kũ̃ kapᵃṛē niñāṇẽ̃ dʰōv-aṇ=tẽ̃*
gaman.DIR unknowingly wife.OBL=DAT cloth.DIR.M.PL wash.TR-INF.OBL=LOC
l-ænd-ā ē
be_attached.INTR-CS1.IMPFV-M.SG be.PR.3SG

'Gaman causes/forces his wife to unknowingly/accidentally wash the clothes.'

With *kʰaṛāvaṇ* it is also possible to place the adverb in the embedded clause but, due to the general prohibition against adverbs like *niñāṇẽ̃* in clauses with *-āv* causatives, its acceptability is somewhat degraded.

(52) *(?)gāmaṇ zāl=kũ̃ kapᵃṛē niñāṇẽ̃*
gaman.DIR wife.OBL=DAT cloth.DIR.M.PL wash.TR-INF.OBL=LOC
dʰōv-aṇ=tẽ̃ kʰaṛ-ænd-ā ē
stand.INTR-CS1.IMPFV-M.SG be.PR.3SG

'Gaman causes/forces his wife to unknowingly/accidentally wash the clothes.'

There are to our knowledge no direct equivalents of the periphrastic pseudo-causative in other Indo-Aryan languages. The closest construction is the Marathi "analytic causative" discussed by Shibatani & Pardeshi (2002: 143), which is formed using the verb *lāvṇe* 'make' as an "auxiliary" verb, with the main verb appearing in a non-finite nominal form. Marathi *lāvṇe* is cognate with Siraiki *lāvaṇ* 'attach/set'; in Marathi, the construction appears to be productive, though Shibatani & Pardeshi (2002: 143) note that this causative cannot be based on "inactive intransitives", which makes it more similar to *kʰaṛāvaṇ* than *lāvaṇ* in Siraiki.

8 The Siraiki causative system in historical perspective

In this section we attempt to build a synchronic and diachronic account of the causative system; in so doing, we necessarily provide a partial diachronic account of causatives in Indo-Aryan more generally.

Synchronically the two main causative morphemes are *-āv* and *-vāv*. The suffix *-āl* is a true causative, but it is unproductive and restricted to a small number of frequent roots, and it is somewhat closer to a transitive morpheme, entailing Agent-like, as well as Causer-like, properties of its subject. In addition, *-āl* does not stand in complementary distribution with either *-āv* or *-vāv*. The periphrastic causative construction makes use of two verbs which are historically, and in one case synchronically, *-āv* causatives, but is not itself clearly causative, and shows very restricted distribution, as of an idiomatic construction. The most important question is how to account for the partly complementary, partly overlapping, distribution and functionality of *-āv* and *-vāv*.

There can be no fully coherent synchronic account of the distribution of *-āv* and *-vāv*, since the synchronic situation is the result of more than one irregular diachronic process. The causative in *-āv* is the older, and is no longer fully productive. In general, *-vāv* is fully productive, and has been gradually replacing *-āv* throughout the verb system. In the southern Siraiki dialect on which our data is based, *-vāv* has all but fully replaced *-āv* as the causative marker for transitive verbs; *-āv* survives only with particularly frequent transitive stems like *kar-*, and a few like *ap^{a}ṛāv-* 'have caught' where it has lost its valency-increasing function and become a bivalent indirect causative formant.

The suffix *-vāv* appears to exist in two forms: one as a simple indirect causative, the other as a double causative. The double causative function is the older, but even the surviving double causative uses in Siraiki can be analysed so as to treat *-vāv* itself as a simple causative. Paradigmatically, given a set of morphologically related verb stems, *-vāv* productively forms causatives to the most transitive or causative stem. For most verbs, where *-āv* is restricted to intransitive stems, *-vāv* functions as causative to the transitive.[27] Where there exists an *-āv* causative to the transitive stem, *-vāv* functions as causative to this (as with *kar^{a}-vāv-* 'cause *x* to make *y* do *z*'); its apparent double causative value is due to the absence of *-āv* before *-vāv*, which can be accounted for by double affix reduction (Kulikov 1993). Due to its origin as a double causative, however, *-vāv* has another function, that of indicating indirect causation. As a necessarily indirect causative, *-vāv* can attach even to intransitive stems such as *d^{h}op-* 'be washed'.

The full diachronic explanation underlying the attested causative systems in modern Indo-Aryan may not be recoverable, but due to the continued attestation of Indo-Aryan from around 1500BC to the present day, we believe it is possible to provide a coherent and consistent account of the diachrony of causativization underlying the modern Siraiki situation (and also the situation in other modern languages), although this has never been done before.

The original Old Indo-Aryan causative marker was *-áya*, accompanied (usually) with strengthening (*guṇa*) of the vowel of the root to which *-áya* attached, e.g. *pātáyati* 'makes fly' to *pat-*

[27] Or causative to the *-āv* causative: strictly there is no way to tell, but *-vāv* can productively attach to transitive stems where there is no corresponding causative of intransitive.

'fly', *bōdháyati* 'awakens' to *budh-* 'awake'. In the oldest attested Ṛgvedic Sanskrit this formation is largely confined to intransitive stems, but by the middle Vedic period (c. 1000–800BC) causatives to transitive stems are attested without obvious restriction.[28]

The first major development towards the modern situation was the gradual loss of causative sense with *-áya*. At times in Sanskrit, and more consistently in early Middle Indo-Aryan, the original causative has a tendency, when attached to transitive stems, to lose its valency increasing function and become a simple transitive, e.g. Skt. *kāráyati* 'causes *x* to do *y*' (beside simple transitive *karóti* 'does *y*'), but also sometimes 'does *y*', Middle Indo-Aryan (Pāli) *kāreti* (with *e* < *-aya-*) 'does *y*'.[29] Ultimately, the morphological markers of the *-áya* causative became markers of transitivity, and this is how they survive in Siraiki: the vowel quality distinguishing many transitive stems from intransitives derives directly from the vowel strengthening of the *-áya* causative, and the *-áya* itself survives in Siraiki in the imperfective transitive marker *-ēnd* and in the transitive future, e.g. *luṛ^{h}ēndā* 'setting adrift', future *luṛ^{h}ēsī* 'will set adrift'. The same vowel alternation patterns survive in many other modern Indo-Aryan languages, but *-áya* itself is mostly lost in other Indo-Aryan languages.[30]

During the Middle Indo-Aryan period, a suffix *-āpaya* > *-āpē* > *-āvē* was resegmented out of certain Old Indo-Aryan *-áya* causatives to long vowel roots with a historically unclear element *-p-* appearing between root and suffix, e.g. *dāpáyati* 'makes give' to *dā* 'give'. This *-āpē*/*-āvē* was repurposed as a more distinctive causative marker alongside, and ultimately in preference to, the increasingly noncausative *-áya*.

The function of the *-āpē*/*-āvē* causative in Middle Indo-Aryan has been treated by e.g. Edgerton (1946) and Bubeník (1998: 161–183). Edgerton stresses that *-āpē*/*-āvē* is consistently a simple causative, and never lacks distinct causative value (as had been previously asserted). It was used as causative to both transitive and intransitive stems including, already in early Middle Indo-Aryan, to transitive stems which were historically causatives, e.g. *kārāpeti* 'makes do' (where *kār-* represents the originally causative, but in MIA transitive, stem of *kṛ* 'do, make', as seen in *kāráyati* above). There are also, however, apparent blends where a causative in *-āpē*/*-āvē* adopts the root form of the *-áya* causative, but functions as the causative to the simple root, not the *-áya* causative. For example, beside *likhāpē-* 'cause to write' to *likh-* 'write', we also find *lekhāpē-* 'cause to write', with the root vowel analogically taken from the Old Indo-Aryan causative *lekhaya-*.

Already in early Middle Indo-Aryan it was possible, though rare, to double *-āpē*/*-āvē* to create a double causative. In the Aśokan inscriptions can be found *likhāpāp-* with double causative sense 'cause to have written', and also *khānāpāp-* 'cause to have dug', causative to *khānāp-* 'have dug', itself causative to *khan-* 'dig' (with the vowel of *khān-* deriving from the Old IA causative *khānaya-*). But the contexts for use of a double causative are necessarily fewer than those of a simple causative, and doubling of *-āpē*/*-āvē* remains rare in the historical record before the modern period.

In the late Middle Indo-Aryan period, then, we find a fairly complex, and not altogether reg-

[28] See Jamison (1983), Kulikov (2013).

[29] Edgerton (1946). This development may well have passed through a stage of indirect bivalent causative, but whether the details of this can be recovered has never been investigated.

[30] It survives also in Sindhi, in the imperfective, e.g. *lōṛ^{h}īndō*, and future, but also in the subjunctive (e.g. *lōṛ^{h}iē*), and infinitive (e.g. *lōṛ^{h}iṇu*), where it does not survive in Siraiki.

ular, causative system, which nevertheless underlies what we find in the modern languages. Old Indo-Aryan causatives in *-áya* survive with some roots as transitive(/causative) alternants of intransitive stems. The primary morphological causative formation was *-āv* (also less commonly *-āḍ*/*-ār*, equivalent of Siraiki *-āl*), which could freely attach to intransitive and transitive stems.[31]

This system, already established in the Middle Indo-Aryan period, essentially underlies the modern Siraiki situation; although *-āv* has been largely replaced by *-vāv* with transitive stems, traces of its originally unrestricted distribution remain, as discussed in §4.3 and in fn. 20. However, throughout much of the Indo-Aryan sphere, the descendants of *-āvē* coexist alongside the descendants of a doubled version of the suffix, such as Siraiki *-vāv* < *-āv*+*-āv*, likewise Hindi-Urdu *-vā* etc. Although doubling of the causative suffix has existed since Aśoka, as noted above, 'double' causative formations in the modern languages are not necessarily inherited from a common source, but appear to have been independently renewed in different modern languages, since e.g. Kashmiri shows doubling with its extended versions of the simple suffix, *-ināv* and *-irāv*, while Gujarati derives double causatives by combining different simple causative suffixes, including *-aw* but also *-aḍ* and *-ḍaw*. In Marathi and Sindhi, double causatives are not a synchronically productive part of the language.

In no modern Indo-Aryan language does the double causative retain double causative function in all its uses. In Siraiki, Panjabi and Hindi-Urdu in particular, where the double causative is no longer transparently a morphological doubling of the simple causative, the double causative function is now the more marginal, and the suffix concerned is now the most productive simple causative marker. We believe that in these languages, at least, the reanalysis and productivity of the original double causative is likely to be related to the stress-based vowel reduction which underlies the neutralization between intransitive and transitive root forms in the vowel alternation class of verbs, introduced in (5). Prior to this neutralization, it was never ambiguous to which stem a causative in *-āv* was formed. To take the Siraiki verb 'drift' as an example (cf. 11, 17), prior to the vowel reduction there would have been no ambiguity: a causative such as *lōṛʰ-āv* would be unambiguously causative to the transitive stem, meaning therefore 'make set adrift'; and if a causative *luṛʰ-āv* were formed, this would evidently be causative to the intransitive stem, meaning 'make drift'.[32] Double causatives, if formed to either stem, would likewise be unambiguous. But once such suffixed stems underwent vowel reduction, neutralizing the difference between intransitive and transitive root variants, the potential for ambiguity arose. The causative *luṛʰ-āv* would have two readings, bivalent (causative to intransitive) and trivalent (causative to transitive), while being morphologically most consistent with the former reading. The double causative *luṛʰa-vāv* could also in principle have two readings, trivalent and quadrivalent.

Such a system may not be as problematic as it appears, since context will usually serve to disambiguate the desired reading, and this system seems to have persevered for some time, as discussed below. Nevertheless, some reinterpretation of the causative system, at least with these vowel alternation roots, was certainly made more likely by the vowel reduction. One obvious solution to the ambiguities here is to treat *luṛʰ-āv* as what it looks like, i.e. causative to the intransitive, and to generalize the original double causative for the trivalent reading.

[31] A representative snapshot of late Middle Indo-Aryan is found in the Apabhraṃśa of the *Paümacariu* of Svayambhūdeva; see De Clercq (2010: 74–75).

[32] Here we use 'as if' modern forms, for clarity.

This development underlies the causative systems found in Hindi-Urdu, Panjabi and Siraiki, and some other modern languages. Notably, however, the equivalent vowel reduction did not occur in Sindhi and Marathi, and in these languages the cognates of *-āv* remain as the basic, productive causative, and the double causative (or its reflex) is either not found or is extremely rare.

In Siraiki, the system of intransitive/transitive stem alternations remains independent of *-āv* causativization, leading to the coexistence of bivalent transitive and causative formations (cf. §4.2). In Hindi-Urdu and Panjabi, on the other hand, many bivalent causatives in *-ā* (< *-āv*) have been integrated with the system of intransitive/transitive stem alternations (cf. §2.3).

Therefore, stress-based vowel reduction, which neutralized the difference between intransitive and transitive stems in the causative, resulted in ambiguity and multivalency of the simple and double causative suffixes, and ultimately led to a realignment of the system. In different languages, however, the outcome of the realignment was different. In Siraiki, the system of intransitive–transitive stem pairing remained independent of causative suffixation, and the system was renewed so that simple *-āv* was primarily associated with intransitive stems, and originally double *-vāv* with transitive stems; a secondary distinction of direct vs. indirect causation is found, though somewhat inconsistently. In Hindi-Urdu, on the other hand, a significant proportion of *-āv* causatives were used to redetermine the intransitive-transitive stem pairing, creating new, more distinct, transitive stems alongside existing intransitive stems.[33] In attachment to transitive stems, both *-ā* and *-vā* remain possible, but the distinction between them is largely one of directness, rather than simple vs. double causative.

The absolute chronology of these developments is difficult to pin down, but it may be that the reduction of root vowels occurred considerably earlier than the productivity of *-vāv*/*-vā*. The former is found already in medieval Hindi and Old Panjabi, whereas the productivity of *-vāv*/*-vā* is much more recent, and its spread at the expense of *-āv*/*-ā* is still ongoing.[34] The locus for the reanalysis was roots with vowel-only alternation between intransitive and transitive stem variants, as in (5); this is just one pattern alongside other alternations (change in final consonant of the root, or suppletion), as discussed above, and for roots showing these other alternations vowel reduction did not result in ambiguity. In these roots, there was no pressure to replace *-āv* with *-vāv* as marker of the trivalent causative; and the analogy of these roots appears to have prevented the spread of *-vāv* as a trivalent causative even among the roots with vowel-only alternation for some time.

Much remains to be uncovered regarding the development of causativity in Indo-Aryan; in particular, we have discussed only a few languages here, whose data is readily available. A comprehensive survey of causativization patterns across all Indo-Aryan languages would no doubt enable some refinement of the proposed developments sketched here.[35]

[33] Precisely repeating, therefore, the development of *-áya* in Middle Indo-Aryan.

[34] For Siraiki, as late as Burton (1849: 119) the double causative was "not much used, except in books and by educated men"; Burton notes only the double causative value of *-vāv*.

[35] It is also evident that we have not accounted for the origins of the *-āl* causative. The origin of this suffix is not clear. Given the distribution of its cognates in Hindi-Urdu, Panjabi and Gujarati, it appears that *-āl* is partly morphophonologically conditioned, generally occuring with frequently used verbs whose stems ended in vowel; but Siraiki, Sindhi and partly Gujarati clearly have it in other environments too. Despite occurring with a small set of highly frequent verbs in a number of Indo-Aryan languages, it appears never to have been a productive causative marker.

Nevertheless, in this paper we have shown that the rich causative system of modern Siraiki contributes in important ways both to our understanding of causative systems crosslinguistically, and to the reconstruction of the history of causativization in Indo-Aryan. In particular, Siraiki evidences clear grammatical differences between transitivity and causativity, which are not always clearly distinguished in work on modern Indo-Aryan languages. In addition, the similarities and differences between the causative system of Siraiki and that of closely related languages like Panjabi and Hindi-Urdu allows us to draw some preliminary conclusions regarding the development of causativity in Indo-Aryan.

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