# Reduplicated presents and pluractionality in Greek and Sanskrit 

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#### Abstract

In Indo-European languages the recessive category of reduplicated presents encompasses a variety of forms whose semantics is still a matter of intense debate. In this respect, scholars' opinions are divided as to whether the original meaning of these formations was related to the iterative-intensive Aktionsart, or to the perfective aspect, but neither of the hypotheses seems to be fully supported by the preserved materials. Considering that the intertwining between lexical and verbal aspect is also one of the key points in the investigation of pluractionality, we will make reference to the features of this broad cross-linguistic category in order to clarify the functions of reduplicated presents in Homeric Greek and in Vedic Sanskrit. In particular, we will show how different pluractional meanings, all related to the basic notion of iterativity, emerge through the various contexts of use, and how the category of reduplicated formations can receive a unitary reading as an expression of pluractionality.


Keywords: Ancient Greek, Vedic Sanskrit, verb, reduplication, pluractionality.

## 1. The semantics of reduplicated presents

In Indo-European languages the category of reduplicated presents is quite restricted and recessive. In Greek and Sanskrit, the attested forms are both athematic (e.g. Gr. $\delta i \delta \omega \mu$, Skr. dádāti "give") and thematic (e.g. Gr. $\pi i \pi \tau \omega$ "fall", Skr. tíș̣thati "stand"), and display different strategies of reduplication: basically, the 'heavy' type CVC- or CV̄- (e.g. Gr. $\beta \alpha \mu \beta \alpha i v \omega$ "stutter", Skr. járbhurīti "tremble") and the 'light' type CV- (e.g. Gr. $\mu i \mu \nu \omega$ "remain", Skr. pibati"drink") ${ }^{1}$. In addition, a number of verbs

[^0]exhibit polymorphic presents (e.g. Gr. $\mu \varepsilon \varepsilon v \omega / \mu i \mu v \omega$ "stay", Skr. hánti/ jíghnate "hit").

Concerning the semantics of this variegated class, scholars' opinions are still divided into two different approaches: those who follow the Neogrammarian view that, from Delbrück (1897) onwards, points out the original iterative-intensive Aktionsart of reduplicated formations, and those who follow the French school approach that, since Vendryes (1918), affirms their perfective aspectual value ${ }^{2}$. The terms and the development of the discussion are well summarized by Giannakis (1997) and, more recently, by Kulikov (2005: 442), who highlights the impasse between two tendentially opposed visions: <All these statements are extremely difficult to prove or to refute. [...] neither of the hypotheses is supported by the bulk of the material».

Our research moves from the observation that the intertwining between Aktionsart and verbal aspect, which is at the heart of this prolonged debate, is also one of the key points in the investigation of pluractionality. Therefore, in the next section we will discuss some relevant features of this category that will be useful in order to explore the meanings and functions of reduplicated presents attested in Homeric Greek (analyzed in $\S 3$ ) and in Vedic Sanskrit (discussed in $\S 4)^{3}$.

## 2. Pluractionality and reduplication

In his seminal observations, Jespersen (1924: 210-211) argued that not only entities, but also events can be quantified, and stated the necessity of a special category coding the 'plural of the verbal idea' as a parallel to nominal number. Initially labeled as 'verbal plurality' by Dressler (1968), this notion has been further investigated by Cusic (1981) and, since then, it has been the subject of intense typological research (e.g. Xrakovskij, 1997; Corbett, 2000; Wood, 2007; Cabredo Hofherr and Laca, 2012). In this field, the term 'pluractionality', coined by Newman (1990), has spread in use with

[^1]reference to the encoding of information about <the multiplicity of actions, events, occurrences, occasions and so on; but in addition, whatever indicates extension or increase, whether in time or space, of actions or states of affairs» (Cusic, 1981: 64).

Since, according to this broad definition, the notion of 'event plurality' arrives to encompass concepts such as repetition, intensity, distribution, frequency, duration, habituality and even stativity, it is not surprising that, in the relevant literature, the relation with the domains of actionality and aspectuality is still so frequently debated without reaching a consensus opinion. In fact, some scholars view pluractionality as mainly pertaining to lexical aspect (e.g. Dressler, 1968; Cusic, 1981; Xrakovskij, 1997; Wood, 2007), while others focus on the interaction with verbal aspect (e.g. Shluinsky, 2009; Bertinetto and Lenci, 2012).

Considering the linguistic expression of this constellation of meanings, cross-linguistic research reveals that many languages can encode multiple events by means of morphological devices affecting the verb, or by lexical tools. In addition, as noted by Bertinetto and Lenci (2012: 853), these various strategies <are not mutually exclusive, neither paradigmatically (for one and the same language may present, e.g., affixes and periphrases) nor syntagmatically (for one and the same sentence may exhibit, for example, both dedicated affixes and frequency adverbials)».

As for pluractional marking on the verb in particular, one of the most widespread strategies are reduplicative processes (Rubino, 2013), which, due to their iconic nature, lend themselves to vehiculate «such concepts as distribution, plurality, repetition, customary activity, increase of size, added intensity, continuance» (Sapir, 1921: 79). More precisely, according to Moravcsik (1978: 317): <the most outstanding single concept that reduplicative constructions recurrently express in various languages is the concept of increased quantity», that is, a notion that, projected in the verbal domain, corresponds to the nucleus of pluractionality, understood as multiplicity and iteration of events.

As a matter of fact, according to Cusic's categorization (1981: 67), repetition is the key parameter for the basic distinction between event-internal pluractionality, which characterizes a series of repetitive micro-actions, as in John coughs, and event-external pluractionality, which characterizes a single repeated action, as in John kisses Mary every morning. Also, the two types can intertwine in cases like John knocks every day at Mary's door, thus forming a continuum that includes further parameters and pluractional values. In
fact, the repetitive action is normally continuous, while the repeated action is usually discontinuous and frequent; moreover, the repetition can imply an intensive reading if it requires an increase in energy, or a distributive reading if it involves several participants (subjects and/or objects), spreads in space, or extends over time, specifying itself as a durative or habitual process.

Not surprisingly, some of these concepts are also included in the diachronic map elaborated by Bybee, Perkins and Pagliuca (1994: 172), which depicts the cross-linguistic evolution of reduplicative markers along two parallel paths that, starting from the basic notion of iterative, converge towards the domain of imperfectivity, as shown in Figure 1:


Figure 1. The development of reduplication
(from Bybee, Perkins and Pagliuca, 1994: 172).
We can therefore imagine that, as shown in the semantic map in Figure 2, the double path of reduplication intersects orthogonally the continuum of pluractionality, where the repetition of the event is specified through additional meanings, in an interweaving of actional and aspectual values:


Figure 2. Intersections between pluractionality and reduplication (from Magni, 2017a: 334).

In particular, the concept of iterative can be further specified both in terms of inherent iterativity, i.e. the actional property that characterizes the event-internal pluractionality of repetitive and continuous actions (above on the map), and in terms of situational iterativity, i.e. the aspectual property that characterizes the event-external pluractionality of repeated and frequent actions (below on the map) ${ }^{4}$. As we will see in the next section, this peculiar nexus (and ambiguity) between lexical and verbal aspect crucially characterizes the use and the evolution of some reduplicated presents preserved in the Homeric texts.

## 3. The Homeric presents

### 3.1. The presents with 'heavy' reduplication

As is well known, inherent iterativity is an evident feature of a restricted class of verbs that typically describe multiplicative processes, and it is indeed plausible that several Greek and Vedic reduplicated presents originally lexicalized this type of Aktionsart (Schaefer, 1994: ch. 3) ${ }^{5}$. In particular, the forms with 'heavy' reduplication (partly also onomatopoeic, cf. Tichy, 1983: 289296) like Gr. $\kappa \alpha \gamma \chi \alpha \lambda \alpha \dot{\omega}$ "laugh, rejoice", $\kappa \alpha \rho \kappa \alpha i p \omega$ "tremble, quiver", $\mu \alpha \rho \mu \alpha i p \omega$ "shine, sparkle", or Skr. járbhurīti "tremble, quiver", vāvadīti "resonate, resound". A Homeric example with $\beta \alpha \mu \beta \alpha i v \omega$ "stutter, babble" is in $(1)^{6}$ :

$\beta \alpha \mu \beta \alpha i v \omega v, \alpha \dot{\alpha} \alpha \beta \circ \varsigma \delta$ д̀ $\delta i \dot{\alpha} \sigma \tau \dot{\prime} \mu \alpha \gamma i \gamma \nu \varepsilon \tau^{\prime}$ ó $\delta o ́ v \tau \omega v$. (K 375; hapax)
" $[. .$.$] he stopped outside himself$
stammering, noise of teeth came out of the mouth."

[^2]In similar cases, <plurality of situations emerges in the null context, i.e., in the absence of adverbials and/or explicit extralinguistic information inducing iterativity» (Tatevosov, 2002: 334). However, in many other cases, the impression that these forms tend to convey also other pluractional meanings is confirmed by their frequency in combination with adverbs or in contexts that suggest an intensive reading of the whole event, like $\kappa \omega \kappa \dot{v} \omega$ "howl, moan" in (2), $\delta \alpha \rho \delta \dot{\alpha} \pi \tau \omega$ "consume, devour" in (3), $\pi \circ \rho \phi \dot{\rho} \rho \omega$ "surge, tremble, undulate" in (4), and $\pi \alpha \pi \tau \alpha i \nu \omega$ "scrutinize, inspect" in (5):
(2) $\dot{\alpha} \mu \phi^{\prime} \alpha \dot{v} \tau \tilde{\omega} \chi \nu \mu \dot{\varepsilon} \nu \eta \underline{\lambda i \gamma \alpha \alpha} \kappa \omega \kappa \dot{\varepsilon} \varepsilon \iota[. .] ..(\theta$ 527; cf. T 284, $\delta 259)$
"Pouring out on him, she shrilly howls [...]."
(3) $[. ..] \dot{\alpha} \lambda \alpha \dot{\alpha} \varepsilon ँ \kappa \eta \lambda o 1$

"[...] but [the suitors] at their ease
consume our goods beyond measure, and there is no sparing."

"[...] and much the heart was trembling to him waiting."

"Terribly glaring, like one in act to shoot."
Interestingly, some of these verbs are related to other non-reduplicated presents: for instance, $\delta \rho \dot{\varepsilon} \pi \omega$ "pick" for $\delta \alpha \rho \delta \dot{\alpha} \pi \tau \omega$, and $\phi \dot{\nu} \rho \omega$ "mix" for $\pi \circ \rho \phi \dot{v} \rho \omega^{7}$. Furthermore, the fact that both lexical means and context reinforce the link between the reduplicated forms and the expression of 'event plurality', can also favor the intertwining between the actionality of inherent repetition and the aspectuality of situational repetition. In fact, in some examples the two sides of iterativity cannot be easily distinguished and separated, especially when the repetitive process is also repeated and tends, therefore, to describe a series of actions either distributed among different participants, like $\mu \alpha \mu \dot{\alpha} \omega$ "quiver" in (6) and $\pi \alpha \phi \lambda \dot{\alpha} \zeta \omega$ "boil" in (7), or diffused in space, like $\pi 01 \pi v v ่ \omega$ "rush, bustle" in (8), and again $\pi \alpha \pi \tau \alpha i \nu \omega$ in (9):

[^3]
"Tremble the feet below and the hands above."
(7) [...] $\dot{v} \nu \delta \dot{\varepsilon} \tau \varepsilon \underline{\pi} \pi \lambda \lambda \dot{\alpha}$

"[...] then many (are)
the boiling waves of the sea that resounds a lot."

"When they saw Hephaestus bustling through the halls."


"The two sat at the altar of the great Zeus,
eyeing on all sides, always expecting death."

By accepting the idea that reduplicated presents are not only iterativeintensive but, depending on the contexts, can also express additional pluractional meanings, one can better explain the presence of reduplication also in $\delta \alpha \iota \delta \dot{\alpha} \lambda \lambda \omega$ "adorn", which in both occurrences definitely admits a distributive reading, as well as the hapax $\delta \varepsilon v \delta i \lambda \lambda \omega$ "turn the eyes", in example (11):
(10) $\pi 0^{\prime} \varepsilon ı \delta \dot{\varepsilon} \pi \rho \omega \dot{\prime} \tau \iota \tau \tau \alpha \sigma \dot{\alpha} \kappa \circ \varsigma \mu \dot{\varepsilon} \gamma \alpha \tau \varepsilon \sigma \tau \iota \beta \alpha \rho o ́ v \tau \varepsilon$

"He first made a large, heavy shield
adorning it throughout, around it set a shining edge."


"To them the knight Nestor Gerenius recommended many things, looking towards each one, Odysseus in particular."

### 3.2. The presents with 'light' reduplication

In this perspective, one can also clarify the pluractional values of some presents with 'light' reduplication, like $i \alpha \alpha \chi \omega$ ( $<{ }^{*}$ Fi- $F \alpha \chi-\omega$ ) "scream, resound", which is attested 37 times, of which 22 in combination with intensive adverbs, like $\mu \dot{\varepsilon} \gamma \alpha, \mu \varepsilon \gamma \dot{\alpha} \lambda \alpha$ "greatly", or $\sigma \mu \varepsilon \rho \delta \alpha \lambda \varepsilon$ 立 "terribly" (Giannakis, 1997: 227-228), as in (12), while elsewhere the context suggests a distributive reading, as in (13):


"So he said, the Argives shouted loudly, all around the ships terribly resounded to the roaring Achaeans."
 $\dot{\eta} \mu \varepsilon i ँ \varsigma ~ \delta \grave{\varepsilon} \delta \varepsilon i \sigma \alpha \nu \tau \varepsilon \varsigma \dot{\alpha} \pi \varepsilon \sigma \sigma \dot{\jmath} \mu \varepsilon \theta^{\prime}[. .$.$] ]. ( 395-396; cf. Ф 10)$
"Dreadfully he moaned loudly, all around the rock resounded, we jumped back terrified [...]."

Mostly iterative-distributive is also the usage of $i \dot{\alpha} \lambda \lambda \omega$ "extend, lengthen" ${ }^{8}$, which recurs 20 times, of which 15 in the Odyssey. Here, 14 occurrences repeat with a few variations the formula "stretch out the hands", whose parallel with the Vedic expression bāhávā sisarti "stretch out the arms" (cf. RV II, 38, 2 and RV VII, 62, 5) had already been noted by Aufrecht (1865: 273-275):

"Then over the ready foods placed in front of them
they stretched out their hands."

Concerning the usage of $i \alpha \dot{\omega} \omega$ "spend the night, keep night watch", attested in 10 cases and usually in verse-final position, even Giannakis, whose book is devoted to endorse the approach of the French school, is forced to admit the absence of perfective value: <no instance of iavi $\omega$ in Homer can be said to have such meaning» (Giannakis, 1997: 219). As a matter of fact, the reading of this verb is sometimes iterative, as in (15), and more frequently habitual, as in (16) and (17), which refers to Hera:


"For nine nights' space about my own body they were keeping night watch; by turns they were watching [...]."

8 Chantraine (1999 [19681]: s.v.) hypothesizes a reduplicated yod-present ${ }^{* i}-\alpha \lambda$ - $y \omega$, probably related to "$\lambda \lambda \circ \mu \alpha \iota^{\prime}$ "jump"; according to Beekes (2010: s.v.), who accepts the derivation from the IE root *sel- "set in movement", a connection with Skr. sisarti "stretch out, draw out" is also plausible.

9 Chantraine ( 1999 [1968] $]$ : s.v.) postulates a reduplicated present ${ }^{*} i-\alpha F-y \omega$, while Beekes (2010: s.v.), starting from the IE root ${ }^{*} h_{2} e u$-, $h_{2} u$-es- "pass the night", reconstructs the form ${ }^{*} h_{2} i_{-} h_{2}$ eus-ié/o-


"By these [pigs] four dogs, savage as wild beasts, were always sleeping, which the swineherd had reared, a leader of men."


"One cannot, nor is it worthy to oppose your word,
for you spend the nights in the arms of the great Zeus."

### 3.3. The polymorphic presents

At this point, the idea that reduplicated forms can encode diverse pluractional meanings encourages us to reanalyze also some polymorphic presents, that is, those verbs featuring two variants, one formed only by a productive thematic suffix and one formed (also) through reduplication (Kujọee, 1973). Considering the couple $\pi \varepsilon$ ' $\tau \circ \mu \alpha \mathrm{l} / \pi i \pi \tau \omega$ "fly/fall, roll down", the reduplicated form is found in 32 verses, often in verb-final position, and it is clear that the punctual/perfective value fades away in the many passages in which $\pi i \pi \tau \omega$ has the iterative-intensive sense of "fall continuously", as in (18) and (19):
(18) [...] vıф่́ $\delta \varepsilon \varsigma \delta^{\prime} \dot{\omega} \varsigma \pi \tilde{\pi} \pi \tau 0 \nu$ है $\rho \alpha \zeta \varepsilon$,

 "....] like snowflakes [the stones] fell ever earthward, flakes that a blustering wind, as it shakes the shadowy clouds, sheds thick and fast upon the bountiful earth."
(19) $\delta \rho \dot{\alpha} \gamma \mu \alpha \tau \alpha \delta^{\prime}{ }^{\alpha} \lambda \lambda \alpha \mu \varepsilon \tau^{\prime}$ oै $\gamma \mu \circ \nu \frac{\varepsilon}{\varepsilon} \pi \dot{\eta} \tau \rho \mu \alpha \pi \tilde{i} \pi \tau 0 \nu$ है $\rho \alpha \zeta \varepsilon$,

"Some handfuls were falling thick and fast to the ground along the swathe, while others the binders were binding with strings."

From our point of view, also the remarkable frequency of the socalled 'Attic construction' is very relevant, because in this usage, as noted by Giannakis (1997: 180), «a distributive meaning may inhere». In other words, the peculiar syntax of this structure, which combines a neuter plural subject with a verb in the singular, depicts a chain of telic micro-events as a cumulative, distributive and atelic macro-event. Two interesting examples are in (20) and (21):

"And to her who is weeping tears roll down from the eyelids."
(21) ${ }^{2} \chi \theta \alpha \varsigma \pi \dot{\alpha} \rho \pi о \tau \alpha \mu о і ̃ \circ ~ \sum \kappa \alpha \mu \dot{\alpha} \nu \delta \rho \circ v, \tau \tilde{n} \rho \dot{\rho} \mu \dot{\alpha} \lambda \iota \sigma \tau \alpha$

"By the banks of the river Scamander, where a lot of heads of men were falling, the clamor unquenchable arose."

Analogous considerations apply to the couple $\begin{gathered} \\ \\ \chi\end{gathered} \omega / \stackrel{\imath}{ } / \sigma \chi \omega$ "have/hold": ${ }^{\prime} \sigma \chi \omega(<* \sigma \iota-\sigma \chi-\omega)$ is found 35 times in the simple form, but it also occurs with various preverbs and, in a dozen of passages, recurrent formulaic structures highlight pluractional meanings. The continuative reading is in fact evident in (22), where ${ }^{\imath} \sigma \chi \omega$ is synonym of the suffixed variant $i \sigma \chi \dot{\alpha} \nu \omega$ and occurs in the Attic construction ( $\varepsilon p \kappa \varepsilon \alpha$ iै $\sigma \chi \varepsilon \iota$ ), the intensive value is illustrated in (23), while the iterative-distributive meanings are exemplified in (24) and (25), which refers to the six heads of the sea monster Scylla:



"This [torrent] the close-fenced embankments cannot hold back, neither do the hedges of the fruitful vineyards resist its sudden coming when the rain of Zeus falls down."


"In the abode of the nymph Calypso, who perforce
keeps him. And he cannot go back to his native land."


"[The Acheans were] calling each other, and to all the gods
holding up their hands each one made fervent prayer."
(25) $\mu \varepsilon ́ \sigma \sigma \eta \mu \dot{\varepsilon} \nu \tau \varepsilon \kappa \alpha \tau \alpha ̀ \sigma \pi \varepsilon i \circ u \varsigma ~ к о i ́ \lambda o 10 ~ \delta \varepsilon ́ \delta u \kappa \varepsilon \nu$,

"Up to her middle she is hidden in the hollow cave, but she holds her heads out of the dread chasm."

As for the couple $\mu \dot{\varepsilon} v \omega / \mu i \mu \nu \omega$ "stay/stand", according to Giannakis (1997: 127): «With $\mu \varepsilon v \omega$ the verbal action remains open-ended, but the action denoted by $\mu i \mu \nu \omega$ reaches its closure and becomes perfective or
terminative». In our opinion, however, the reduplicated form, which is used 45 times, and also occurs with various preverbs, definitely describes continuative and habitual processes in a number of contexts, like those illustrated by the following examples:


"Telemachus, even if you remain here for a long time,
I will take care of him, and he shall have no lack of what is due to strangers."


"Even if, remaining for five or six years, you ask how much evil the divine Achaeans suffered there."


"[The two men] stood like oaks of lofty crest on the mountains, which face the wind and rain all day long."

 "How he put forth his hands on the shameless suitors all alone as he was, while they always remained banded together in the house."


"Having the same heart and the same name, we, as usual, wait the violent Ares standing next to each other."

In the last example, the expression $\partial \xi \partial \nu \nu$ " $A \rho \eta \alpha$ "the violent Ares" is usually considered as the object of $\mu i \mu \nu o \mu \varepsilon \nu$, and also in other passages the verb occurs with the accusative in the sense of "wait (for someone)": cf. X 92, N 129, $\lambda 210$. However, as remarked by Giannakis (1997: 136), «in 6 out of the 14 cases, this accusative is the word for "dawn" $(\eta \tilde{\omega})$, which is rather a temporal accusative and not the object of $\mu i \mu \nu \omega>$. Considering that the same ambiguity also affects the verb $i \not \alpha v \dot{\omega}$, when it occurs in the expression $\nu v ่ k \tau \alpha \varsigma$ î $\alpha v \varepsilon เ v$, as in example $(15)^{10}$, the overall idea that the main function of reduplication
${ }^{10}$ In this respect, Giannakis (1997: 220) agrees with the observations by Schulze (1892: 73): «vúk $\tau \alpha \varsigma$ non accusativum objecti (ut in vúk $\tau \alpha \varsigma \not ̈ \gamma \gamma \varepsilon เ \nu$ noctem degere) sed temporis esse».
is to signal the transitivity of the verb or the telicity and perfectivity of the action does not seem fully convincing.

On the whole, the examples analyzed so far show that the semantics and the functions of reduplicated presents pertain to the domains of imperfectivity and intransitivity. More specifically, the type with 'heavy' reduplication reveals the original function of encoding the iterative Aktionsart, which is often specified as (also) intensive. However, the tie, sometimes inextricable, between inherent and situational iterativity, which is often contextually specified as distributive or habitual, seems to bring reduplication closer to the domain of aspectuality. In addition, the hypothesized semantic-functional expansion seems to go hand in hand with the reduction and simplification of coding, since the forms with 'light' reduplication are the ones that display the widest range of pluractional values and create oppositions with simple verbs.

As is well known, the prerogatives and the usages of the reduplicated presents tend to become opaque over time. However, through a careful examination of the Homeric texts, we have seen how some of the original functions resurface in formulas, contexts and peculiar structures that crystallize the combination with intensive and distributive adverbs, like $\mu \dot{\varepsilon} \gamma \alpha$ î $\alpha \chi \circ v$ "shouted loudly" in (12) and $\pi \dot{\alpha} \nu \tau \circ \sigma \varepsilon \pi \alpha \pi \tau \alpha i \nu \circ \nu \tau \varepsilon$ "eyeing on all sides" in (9), or the union with dual participants, like $\chi \varepsilon i \rho \alpha \varsigma{ }^{\imath} \alpha \lambda \lambda \circ v$ "stretched out their hands" in (14), and with plural subjects in the Attic construction, like $\pi i \pi \tau \varepsilon \kappa \dot{\alpha} \rho \eta \nu \alpha$ "heads were falling" in (21).

So far, the discussion has focused on the usages and meanings of the reduplicated presents, leaving the comparison with the simple forms in the background; this issue will be detailed in the next section, which is dedicated to the Vedic presents.

## 4. The Vedic presents

### 4.1. Reduplicated presents in Vedic

The relation between reduplication and inherent iterativity confirms Dressler's (1968) observations about verbal plurality and Aktionsart and Schaefer's (1994) investigations on Vedic 'intensives'. Concerning the relation with situational iterativity, one could nonetheless object that any verbal phrase can include a plural subject or object, and that the same events can be represented without the need for a formal encoding of pluractionality. How-
ever, this hypothesis reaches a reasonable certainty when it is observed that, even in the Vedic presents, reduplication is invariably, or at least with more than chance frequency, concomitant with the representation of iterativity, which often is further specified in aspectual terms.

This correlation can be proved by examining the Rig Veda, where the recessive reduplicating class, in addition to being almost entirely monomorphic and, except in a few cases, documented by a limited number of attestations, has also lost the specific value of many of its constituents (Delbrück, 1897: 16-25; Vekerdi, 1961). Despite this, a careful reading of the text allows us to identify some useful examples concerning polymorphic presents.

### 4.2. The polymorphic presents: hánti/jíghnate

For instance, the verbal root han- "kill, hit" displays two variants, one of the root-class: hánti, and one of the reduplicating class: jighnate. According to Joachim, reduplicated forms do not show any differences in meaning with respect to hánti, but they may have had an original iterative sense ${ }^{11}$. This is true if we consider the repetition internal to the event, but things become far more interesting if we consider the repetition external to the event, which, to be precise, manifests itself as distributivity.

In fact, we can observe that, in the Rig Veda, jighnate occurs in combination with a plural object in 16 out of 17 passages, while only one has the singular object sấnum "back, shoulders", which becomes a dual (sánau) in the immediately following stanza. The verses at issue are reported in (31) and (32) ${ }^{12}$ :
(31) indro vṛtrásya dódhatab sánum vájreña hīlitáb / [...] jighnate. (RV I, 80, 5)
"Indra, enraged, hits with the club the back of the furious Vrorra."
(32) ádhi sánau ní jighnate vájreṇa śatáparvaṇā. (RV I, 80, 6)
"[Indra] strikes him on the shoulders with the hundred-jointed club."
A glance at Grassmann's dictionary (1964 [1872¹]: col. 1642-1643) suffices to realize that, on the other hand, singular objects neatly prevail with bánti: for instance, vrtrám "Vrtra" (RV II, 19, 4), śátrum "enemy" (RV IX, 55, 4), śúṣnam "Susna" (RV III, 31, 8), yatudhánam "Yatudhana" (RV X, 87, 5), durmatím

[^4]"malevolence" (RVX, 40, 13), and so on. But there is more: as noted by Bertinetto and Lenci (2012), iterativity frequently results in the signification of habituality or attitudinality, two notions that pertain to the domain of imperfective aspect and whose expression frequently implies plural objects, as can be seen from the comparison between John smokes a cigarette and John smokes cigarettes.

Not surprisingly, the signification of the habitual or attitudinal aspect is rare with the form bánti, but very frequent with the reduplicated present jighnate, as shown in the following example:
(33) vájram éko bíbharti hásta áhitaṃ téna vrtrán ṇi jíghnate. (RV VIII, 29, 4)
"One [Indra] holds the club steady in his hand; with it he smashes obstacles."
This hymn, dedicated to all the gods (Viśve Deváb), resembles a riddle: each stanza enumerates the characteristic features intrinsic to each divinity, without revealing his/her name. For instance, the first verses go: "one is a brown, shifting, fiery young man, he smears golden ointment on himself" (that is, Soma), and so forth for nine stanzas, one for each god; the tenth is dedicated to the poets who, with their poetry, "make the sun shine". The habitual value of the actions described is evident: the god who strikes down the evil beings (vṛtránni), here depicted as "obstacles" (this is the literal meaning of vrtrá-), is Indra; he overthrows them because he is predestined for this task, because this is his function. Elsewhere he is in fact qualified as hántr- "killer": this derivative, like the other nomina agentis with the unaccented suffix -tar-, normally describes a stable characteristic: in Tichy's words, it refers to a habitually repeated action that expresses a permanent quality of the agent ${ }^{13}$.

On the other hand, we observe that since hánti is the 'unmarked' term of the couple, sometimes it can display the same values of its reduplicated counterpart (cf. vṛtrā́ṇi háṃsi "you smash obstacles" in RV VII, 22, 2). However, this present is more frequently used with reference to a specific time frame, as in (34) and (35):
(34) háno vṛtrám jáyā svàb. (RV VIII, 89, 4)
"You will kill Vrtra, you will win the sun."
(35) hanāma enā̆n [...] camasám yé devapānaṃ ánindiṣuh. (RV I, 161, 5)
"We shall smash those who have insulted the cup that gives drink to the gods."
${ }^{13}$ Tichy (1995: 244): «eine gewohnheitsmäßig wiederholte Handlung [...] in der eine bleibende Eigenschaft des Agens zum Ausdruck kommt». For a discussion of this type of agentive derivatives see Lazzeroni (1992; 2012a; 2012b).

With all chances, the fact that the verbal theme han- occurs in all modal forms, including the subjunctive (= future), the optative and the imperative, while jighn- occurs only in the indicative, is not fortuitous nor imputable to mere imbalance between the respective attestations. As a matter of fact, the moods different from the indicative are not suitable for the designation of states and meta-chronic or durative processes, because with them a stative construct usually tends to take on a dynamic and punctual value: the sentence John will know that life is hard is in fact equivalent to John will learn that life is hard (see Lee, 1973; more references in Lazzeroni, 2016).

### 4.3. Other couples and the relation with imperfectivity

Another interesting case concerns the root sac- "follow", which in Vedic displays a present of the thematic class: sácate, and one of the reduplicating class: síşakti. According to Joachim (1978), in this case as well, the semantic peculiarity of reduplicated forms was an iterative feature that, however, is no longer recognizable in the available texts ${ }^{14}$. We agree with this observation, which is further supported by the fact that "follow" is basically an atelic verb, per se not suitable for signifying repetition. In fact, it has been remarked that in languages where iterativity is expressed through reduplication, this value usually manifests with Vendlerian achievements, which, in 'unmarked' situations, are definitely more suitable for the representation of semelfactive and fractionated events: <grammatical multiplicatives can be derived from lexical semelfactives by affixation and reduplication» (Xrakovskij, 1997: 29).

From our point of view, it is nevertheless particularly relevant that reduplicated forms constantly express the habitual aspect, and that indeed they are, more frequently than not, accompanied by adverbs or used in comparisons that highlight the habituality of the event, as illustrated in (36), (37) and (38), where the other reduplicated verb mimāti "moo" is to be noted:
(36) chāyéva víśvam bhúvanaṃ siṣakṣi. (RV I, 73, 8)
"Like a shadow you accompany all creation."
(37) indraṃ síṣakti uṣásaṃná súryab. (RV I, 56, 4)
"[If his divine might accompanies] Indra like the sun accompanies the dawn."

[^5](38) vāşréva vidyún mimāti vatsám ná mātá siṣakti. (RV I, 38, 8)
"[The storm] bellows like a cow. Like a mother her calf, it accompanies [the rain]."
In addition, regarding this pair of verbs, it will be also useful to remember a distinction noted by Delbrück (1897: 20), who suggests that, even though the meaning of sacate often cannot be established with certainty, it seems plausible that this verb originally focused the notion of "coming together", while síṣakti signified "being together" ${ }^{15}$.

Analogous considerations about the expression of habituality apply to the forms in RV I, 66, 2 and IX 84, 2, and there are also cases in which the reduplicated variant combines with an adverb denoting continuity, like vivakti (from vac- "speak") and sádā "always" in example (39):
(39) sádā te náma suayaśo vivakmi. (RV VII, 22, 5)
"Always I keep pronouncing your name, self-glorious one."
Looking for other polymorphic verbs, it is not without significance that, in example (33), the form jighnate occurs with another reduplicated present, bibharti. Discussing this verb, Kulikov (2005: 443) points out that the semantic difference between the two presents from the root bhar- "bring, carry", that is, bhárati and bibharti, corresponds to the different meanings of bringen "bring" and tragen "carry" in German ${ }^{16}$. In other words, concerning the couple bhárati/bibharti, we can say that the first present is telic and usually monoactional, while the second one is atelic and intrinsically pluractional. This assumption is supported by the verses in example (40), where the waters are first described as performing a habitual action distributed on many objects (ghee, milk, and honey), and then presenting a specific offer (soma) to the god:
(40) práti yád ápo ádŗ́ram [...]
ghrtám páyāmsi bíbhratīr mádhūni
[...] indrāya sómam súsutam bhárantīh. (RV X, 30, 13)
"When the waters became visible [...],
carrying ghee, milk, and honey
[...] bringing the well-pressed soma to Indra."

[^6]As remarked by Kulikov (2005: 444), also the class I present from the root nas-, násate is employed with the telic meaning "approach, reach, return (home)", while the reduplicated forms usually describe the repeated action of "touching", as in (41):
(41) arcî rocate [...] níṃānam juhvò múkhe. (RV VIII, 43, 10)
"The flame shines, [...] touching the sacrificial spoons at their mouths (= front part)."

Like the form of bibharti in (40), also nimsanam in the last example is a participial form. In our perspective, it is not surprising that several reduplicated variants occur only, or almost exclusively, in the participle: for instance, pibdamāna- "trudge, plod", from the root pad- "fall, move" (-yapresent pádyate) in RV X, 102, 11; bápsat-, from the root bhas- "chew, devour" (root present bhásat, subj.) in RV X, 43, 7; titrat- "step, make step", from $t \bar{r}-$ "cross (over)" (class I present tárati) in RV II, 31, 2.

As remarked by Magni (2017a: 335), in Homeric poems also the socalled 'intensive' perfects, in which reduplication can be equally interpreted as a pluractional marker, are attested mainly or exclusively in the participle form, and frequently describe an event that continues in the background while the main action proceeds in the foreground. As a matter of fact, this usage not only reflects the overall correlation between reduplicated pluractionals and imperfectivity, but it is also consistent with the observation that <imperfective forms are typically used in backgrounded clauses where the focus is on the situation as continuing (while something else occurs) and not on the outcome of the situation with respect to a particular object. For this reason, backgrounded clauses are often intransitive as well as imperfective» (Bybee, Perkins and Pagliuca, 1994: 171).

### 4.4. The 'reuse' of reduplication

So far, our discussion has neglected some important reduplicated presents that deserve a specific examination. Kulikov (2005: 443) rightly remarks that, although the verbs derived from the roots *dh $\bar{a}-$ "put" and ${ }^{*} d \bar{a}-$ "give" are undoubtedly old reduplicated formations (as proven by Gr. $\delta i \delta \omega \mu$ and $\tau(\theta \eta \mu i)$, their meanings <cannot be taken as divisible». Furthermore, it is also impossible to draw conclusions concerning pluractionality from the contexts and constructions in which they normally occur: in both Sanskrit
and Greek, these presents are monomorphic and do not allow a contrastive analysis; besides, the few examples of situational iterativity do not provide significant indications. Kulikov supposes a connectionist process: «Perhaps, the expansion of reduplicated presents has begun from a few frequent verbs denoting divisible situations (such as, for instance, pibati or jígāti), with the subsequent attraction of verbs with similar semantics» (Kulikov, 2005: $443)^{17}$. This interpretation is quite probable, but we must also keep in mind that reduplication carries out a precise morphological function, since, in both Sanskrit and Greek, it codifies the opposition between the present/imperfect and the root aorist. In fact, only the presence of reduplication guarantees the formal difference between Skr. (á)dadhāt (imperfect) and (á)dhāt (aorist), or between dadhāt (injunctive) and $d h a \bar{a} t$ (injunctive aorist), since in both Vedic and Homeric texts the augment can be omitted.

In Greek we find the same situation: it is in fact known that the socalled 'kappatic aorist' is a monolingual innovation that replaces a root aorist similar to that of Sanskrit, as proven by residual forms like $\kappa \alpha \tau \varepsilon \theta \eta \nu$ and $\dot{\alpha} \nu \varepsilon \varepsilon^{\prime} \eta \nu$ with respect to ${ }_{\varepsilon} \theta \eta \kappa \alpha$ (Schwyzer, 1939: 741), and by $\tilde{\varepsilon} \sigma \tau \eta \nu$, the aorist of the verb ï $\sigma \tau \eta \mu \mathrm{l}$ "stand, set", formally identical to Skr. ástām.

In other words, for roots with long vowel, reduplication assumes a peculiar morphological value because it marks the opposition between the present and the only type of root aorist, i.e. the one with long vowel, which is still alive in Greek and Vedic and, in both languages, is the only one to survive until classical age (Whitney, 1989: 299; Rix, 1976: 214). Basically, the phenomena described above would thus be a case of 'reuse', whereby a declining strategy in the formation of the present finds a novel function.

## 5. Final remarks

To sum up, considering the overall picture of reduplicated formations, we can conclude that (pace Vendryes) most of them pertain to the domain of imperfectivity and that, in accordance with the hypothesis presented here, they are not only consistent with the cross-linguistic evolutionary paths of reduplication described in Bybee, Perkins and Pagliuca (1994), but they also preserve the relics of an ancient set of verbal markers devoted to the expression of plu-
${ }^{17}$ The verb pibati can be interpreted as describing the action of drinking as a series of sips, while jígäti describes the action of going as a series of steps (Kulikov, 2005: 442).
ractional meanings. Accordingly, the majority of these forms is naturally integrated in the present systems of the various languages, be they old pluractional verbs denoting basic actional values (inherent iterativity) through 'heavy' reduplication, or relatively recent formations expressing (also) pluractional and aspectual values (situational iterativity) through 'light' reduplication.

Notably, in Greek a sub-class of reduplicated forms is incorporated in the perfect system, forming a problematic category of perfects that do not display resultative values, but usually describe actions and events as ongoing processes: these are mostly noise verbs like $\beta \dot{\varepsilon} \beta p u \chi \alpha$ "I roar", or $\kappa \frac{\varepsilon}{\varepsilon} \kappa \lambda \eta \gamma \alpha$ "I scream", but also verbs describing activities of the senses like $\delta \varepsilon \delta \delta o \rho \kappa \alpha$ "I gaze", or feelings like $\gamma \dot{\varepsilon} \gamma \eta \eta^{\prime} \alpha$ "I am happy". On the one hand, this process of inclusion can be partly due to the formal reasons discussed by Di Giovine (2010) but, on the other hand, it is also true that 'intensity' is only a part of the various pluractional meanings encoded by these formations (Magni, 2017b) ${ }^{18}$.

As a matter of fact, in both 'intensive' perfects and reduplicated presents we observe that the basic idea of repetition tends to occur in combination with additional pluractional values such as intensity and distribution, but also habituality and attitudinality, which complete the map in Figure 3:


Figure 3. Reduplication and pluractional meanings
(adapted from Magni, 2017a: 337).

[^7]The fact that reduplication can convey event plurality, degree effects and aspectual notions not only <corroborates the view that there is a natural connection between these domains» (Magni, 2017b: 9), but also suggests that the observation of languages where a single marker displays all these uses can be of special interest for a diachronic analysis of pluractionality.

In our case, the data concerning the so-called 'intensive' formations seem to indicate that the increasing interaction between inherent and situational iterativity triggers a process of semantic and functional expansion whereby reduplication gradually shifts from the encoding of Aktionsart towards the expression of verbal aspect. According to our hypothesis, these phenomena, which probably start from the frequent addition of degree effects, are particularly favored by the expression of habitual meanings, which definitely blur the connection between reduplication and iterativity ${ }^{19}$.

In the space between actionality and aspectuality, the recessive category of reduplicated presents can thus receive a unitary reading as an expression of pluractionality, whose multifarious values resurface in the Homeric formulas and in the Vedic passages.

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[^0]:    * The present paper is the result of a continuous exchange of ideas between the two authors, a dialogue sadly interrupted in January 2020, when we all lost Prof. Lazzeroni. In particular, Elisabetta Magni is responsible for the writing of $\$ 1,2$, and 3 , while Romano Lazzeroni wrote $\$ 4$ and 5 .
    ${ }^{1}$ For a detailed discussion of reduplication in Indo-European see Tischler (1976) and Di Giovine (1996: ch. 3), for an overview of the morphophonology of reduplicated presents in Vedic and Indo-European see also Sandell (2011).

[^1]:    2 On the one hand, Delbrück (1897: 25) affirms that «die reduplizierende Präsensklasse itera-tiv-intensiven Sinn hatte». See also Schwyzer and Debrunner (1950: 260) for Greek, and the monograph on Vedic intensives by Schaefer (1994). On the other hand, according to Vendryes (1918: 123): <on peut admettre que le type thématique à redoublement avait dès l'indo-européen une valeur perfective». In the same vein, Chantraine (1958:313) affirms: «ces présents comportaient une valeur déterminée c'est-à-dire qu'ils envisagent l'aboutissement de l'action». See also Giannakis (1997).

    3 Some of the ideas presented here have been partially addressed in a previous article (MAGNI and Lazzeroni, 2019).

[^2]:    4 The concept of inherent iterativity corresponds to Tatevosov's multiplicative Aktionsart: <Multiplicative refers to situations that repeat many times with the same participants and occupy a single time span. In other words, multiplicative is associated with repeating simplex situations that constitute one complex situation» (Tatevosov, 2002: 332). On the other hand, «the iterative involves situations occupying different time spans, i.e., making up a set of situations rather than a single situation». Besides, it is «normally allowed for [...] verbs with different actional characteristics provided that they are combined with a habitual gram, so iterativity belongs to the aspectual rather than the actional domain» (TATEVOsov, 2002: 333). In place of the labels 'multiplicative' (used as a synonym of event-internal pluractionality also in Xrakovskij, 1997 and Shluinsky, 2009) and 'iterative' (used as a synonym of event-external pluractionality in Xrakovskij, 1997 and Bertinetto and Lenci, 2012), we preferred the clearer distinction between inherent and situational iterativity, already proposed in previous works by Lazzeroni (2011: 132).

    5 As argued by Tatevosov (2002: 333): <multiplicativity characterizes a restricted and possibly closed class of verbs such as cough, drip, blink, shoot, etc.».
    ${ }^{6}$ The translations of the Homeric texts given throughout are our own, but those provided by Murray $(1919 ; 1924)$ for the Loeb editions were also consulted.

[^3]:    7 This verb has an uncertain but, from our point of view, interesting relationship with Skr. járbhurïti/bhuráti "tremble, shake", cf. Chantraine (1999 [19681]: s.v.) and Giannakis (1997: 274). However, some scholars prefer a transitive meaning for the usage in example (4) and translate: "his heart pondered on many things ( $\pi \circ \lambda \lambda \dot{\alpha})$ ".

[^4]:    ${ }^{11}$ Joachim (1978: 175): «Sie zeigen im RV keine von bánti verschiedene Bedeutung, können aber ursprünglich iterativen Sinn gehabt haben».

    12 The translations given throughout are our own, but those provided by Geldner (1951-1957) and Jamison and Brereton (2014) were also consulted.

[^5]:    ${ }^{14}$ Joachim (1978: 163): «Die semantische Besonderheit der reduplizierten Formen wohl ein iteratives Element gewesen ist, das aber in den uns vorliegenden Texten nicht mehr aufzufinden ist».

[^6]:    ${ }^{15}$ Delbrück (1897: 20): «Wenn auch sácate in seiner Bedeutung oft nicht recht zu fassen ist, so ist mir doch wahrscheinlich, dass es ursprünglich das Zusammenkommen, síşakti das Zusammensein betont hat».
    ${ }^{16}$ Kulikov's observations develop a remark by Delbrück (1897: 18): «bibharti [...] wird von der nicht auf ein Ziel gerichteten Thätigkeit des Tragens gebraucht».

[^7]:    18 According to Di Giovine (2010: 199), the relevant formal features are: reduplication, apophonic long vowels, and predesinential $-\kappa$ - or $-\chi$ - as in kappatic or aspirated perfects.

[^8]:    ${ }^{19}$ Concerning the 'intensive' perfects in particular, it seems that the expression of a wide range of habitual meanings contributes to turn reduplication into a sort of aspectual marker that generically denotes 'states', with or without reference to a causal event, thus accompanying the integration between intensive and resultative perfects (MAGNI, 2017a: 342).

