Distributive Pluractionality and Plurality in Ingush:
The case of G.*uozh/lieg*

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1   Introduction

Pluractionality, also referred to as *verbal plurality* (Yu 2003) or *event plurality* (Wood 2007), is a morphological category that indicates some sort of "multiplicity" in the semantic reading of a verb. The prototypical interpretation of a pluractional verb is that of *iterativity* (repeated actions). This reading is illustrated in the following examples from Ingush, a Nakh language of the Northeast Caucasus and the focus of this study, in which a pluractional verb differs from its simulfactive version in the stem vowel (or by suppletion):[1]

(1)   (a) *Siedq'a   q'eagar.*
          star   flash.WP

          The star flashed (once).

      (b) *Siedq'a   q'ieg.*
          star   flash:PLC.PRS

          The star sparkles. (i.e., flashes repeatedly)

(2)   (a) *Zhwaliez   Muusaajna   mott   hwaqar.*
          dog.ERG   Musa.DAT   tongue   wipe.WP

          The dog licked Musa (one time).

      (b) *Zhwaliez   Muusaajna   mott   hwieqar.*
          dog.ERG   Musa.DAT   tongue   wipe:PLC.WP

          The dog licked Musa (many times).

In certain instances, however, some pluractional verbs can yield *distributive* readings (action distributed across multiple participants),[2] discussed by Yu (2003) and Wood (2007). Wood illustrates this phenomenon with the following examples from Chechen, in which a pluractional verb yields the prototypical iterative reading only when the absolutive argument is singular (c). When the absolutive argument is plural (b), the verb does not have an iterative reading, the theoretical interpretation being that the multiplicity of action is instead "distributed" among the participants (p. 211):

(3)   (a) *Bomba   iqqira*
          bomb   explode.WP

          The bomb exploded.

      (b) *Bombanash   lilxira*
          bomb.PL   explode.PLC.WP

          The bombs exploded.

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[1]Although many of the corpus entries do not conform to the standard orthography and fail to represent vowel shortening in closed syllables (e.g. *q'ieg* in (1b) should be *q'eg*), I have chosen to preserve most of the transcriptions as they originally appear. (Modifications are indicated by a footnote.)

[2]The issue of *durative* readings (prolonged action) is left for a future investigation.

(c) *Bomba   lilxira*
   bomb   explode.PLC.WP

   The bomb exploded again and again (one bomb produces several explosions).

Wood goes on to argue that the appearance of distributivity is often merely a result of atelicity, but she does concede that some pluractional verbs in Chechen are indeed true distributives, though few in number.

The initial purpose of this study, therefore, was to investigate whether such distributive pluractional verbs also exist in Ingush, the sister language of Chechen. A search of the BITC corpus of Ingush (Nichols 2007) yielded a number of candidates, but the intriguing behavior of a single simulfactive/pluractional verb pair warranted an exclusive investigation. In this paper I examine the properties of simulfactive G.*uozh* and its suppletive pluractional form *lieg*, an Ingush verb pair meaning 'fall' that exhibits unique behavior with respect to distributive pluractionality and argument number.

Section 2 presents the results of a corpus study of the G.*uozh/lieg* pair: 2.1 presents instances of simulfactive G.*uozh*, while 2.2 examines representative tokens of pluractional *lieg*. Section 3 discusses an exceptional sentence and sketches a hypothesis to account for its deviation from the generalizations noted in section 2. Finally, section 4 concludes the paper with speculation regarding a unified account of the verb pair behavior, presenting ideas for further study.

2   Data

In Ingush, approximately 80 pluractional verbs can be formed from a subset of the simulfactive verbs by a change in the stem vowel or by suppletion. In the case of the verb 'fall,' the simulfactive present stem is G.*uozh* (G = consonantal gender agreement prefix *d*, *j*, *v*, or *b*), a member of ablaut class IV (PRS G.*ozh*, VN G.*uozhar*, CVant G.*iezhaa*). Its pluractional version is the suppletive *lieg*, a member of ablaut class I (PRS *leg*, VN *liegar*, CVant *liigaa*). Both forms of the verb usually appear with a deictic prefix such as *wa* 'down' (sometimes transcribed as *wo*). G.*uozh* is marked for gender agreement with its absolutive argument, while *lieg* is not.

A comprehensive search of the the BITC yielded 66 instances of simulfactive G.*uozh* and 16 of pluractional *lieg*.[3] All of the simulfactive forms appear with singular absolutive arguments, while all but one of the pluractional forms take plural absolutive arguments. In addition, only a minority of the pluractional forms have clear iterative readings. These results are summarized below:

simulfactive G.*uozh*	
66 tokens	
0 w/ pl. ABS	66 w/ sg. ABS

pluractional *lieg*		
16 tokens		
15 w/ pl. ABS		1 w/ sg. ABS
6 clear iterative	9 possible distributive	

The clear dichotomy in argument number between G.*uozh* and *lieg* and the paucity of iterative readings for the pluractional items are striking and unexpected results. The next few subsections present examples from the corpus to illustrate these findings.

2.1   Simulfactive G.*uozh*

Of the 66 tokens of simulfactive G.*uozh* in the corpus, 31 are marked for V-gender agreement with the absolutive argument (appearing as conjugated forms of the present stem *v.uozh*). Since V-gendered nouns are exclusively human, masculine, and singular, the total lack of plural absolutives in these examples is expected. Verbs marked for B-, J-, or D-gender, however, may have plural absolutive arguments, but all the tokens of *b.uozh*, *j.uozh*, and *d.uozh* appear with singulars. This was especially surprising for the 11 instances of *b.uozh*, as B-gender is the default for plurals. Examples from each gender class are given below, illustrating the exclusive use of singular absolutive arguments:

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[3]Including all gender classes (*d, v, j , b*) and inflected forms that were transcribed with a form relatively similar to the standard orthography.

V-gender (31 total)

(4) *Suona   Muusaa   **wa-viezhaav**   eanna   xazar.*
1sg.DAT   Musa(V)   down-V.fall.NW   QUOT   hear.WP

I heard that Musa fell down. / I heard that Musa had fallen down.

J-gender (16 total)

(5) *Burgac   seana=chy   **jiezhar**.*
ball(J)   corner=in   J.fall.WP

The ball fell into the corner.

D-gender (8 total)

(6) *Aaz   cy   xovzh   piila   **wa-duozha-dar**.*
1s.ERG   NEG   know.CVsim   glass(D)   down-D.fall-D.CS.WP

I inadvertently dropped a glass.

B-gender (11 total)

(7) *Iz   wachboaxkash   voalash   c'hwa   qor   **waboozh**   cun.*
3s   down-in-B.put.CVsim   V.be.CVsim   one   pear(B)   down-B.fall.PRF   3s.GEN

As he was putting (the pears into the basket) one of them fell down.

(8) *Muusaaz   qiera   **wa-buozha-bar**.*
Musa.ERG   stone(B)   down-B.fall-B.CS.WP

Musa dropped the stone.

(9) *Wovdala   vala   voal,   **Biezhaab**   cyn   max,   Hweaq'al   dar*
fool.GEN   V.die.INF   V.INCP.PRS   B.fall.NW   3s.GEN   price(B)   intelligence   D.be.PPL.NZ
voal   Duqa   wovdalagh.
V.INCP.PRS   a lot   stupid.CMP

The fool is about to die; his price has fallen. The one with sense becomes still more stupid.

2.2   Pluractional *lieg*

In contrast to the simulfactives, all but one of the 16 pluractional forms of 'fall' appear with plural absolutive arguments. Only 6 of these, however, yield relatively clear iterative readings:

(10) *Tyadamazh   **wa-lieg**.*
drop.PL   down-fall:PLC.PRS

Water is dripping. / Drops are falling.

(11) *T'aaqqa   d.h.   juozhan   dy   'a,   dwaghertazh   'a,   **waliigaa**   'a,   yzh*
then   -   ?   D.be.PRS   &   DX-try.CVsim   &   down-fall:PLC.CVant   &   3p
hwuuzacha   xaana,   yz   pacchahwa   jow   hwa 'a iicaacha
turn-around:PL.PPL.OBL   time.DAT   DEM   king.GEN   daughter   DX   &   take.CVant:OBL
cuo   leatta   wajeaqqaai.
3s.ERG   earth.ADV   down-J.take.NW.J

As people were rushing around (or: As the horses were thrashing around dying) he grabbed the czar's daughter and put her on the ground.

(12) *Cuo   oalar,   cq'a   xil   dehwa   boaghacha   xaana,   xiila   mala*
3s.ERG   say.IMPF   once   water.ADV   across   B.come.PPL.OBL   time.DAT   often   drink.INF
eanna   juxa   sacacha   buq'agh   hamaazh   jettazh,   pxorch
QUOT   back   stop.CVtemp   back.LAT   thing.PL   J.strike:PLC.CVsim   ?

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	dettazh,	**waliegadea**	*nax*	*bar*	*txy*	*oalar*
	D.beat:PLC.CVsim	down-fall:PLC-D.CS.CVant	people	B.be.WP	1pex.GEN	say.IMPF

cuo.
3s.ERG

He used to say, when we would cross the river and stop to drink water we were shot at and beaten, and many fell [dead].

(13) | *Muusaaz* | *massa* | *xaana* | *leatta* | *kinashjkaazh* | **waliegadu.** |
|---|---|---|---|---|---|
| Musa.ERG | all | time.DAT | ground.ADV | book.PL | down-fall:PLC-D.CS.PRS |

Musa keeps dropping the books.

(14) | *Muusaaz* | *massa* | *xaana* | *jaashjkaa=chy* | *kinashjkaazh* | **wachyliegadu.** |
|---|---|---|---|---|---|
| Musa.ERG | all | time.DAT | box.DAT=in | book.PL | down-in-fall:PLC-D.CS.PRS |

Musa keeps dropping the books into the box.

(15) | *Loamaghar* | *q'art'uoj* | **chyleg.** |
|---|---|---|
| mountain.ADV.ABL | stone.PL | into-fall:PLC.PRS |

Stones fall from the mountain.

In each of the above examples, although a distributive reading is possible, the default sense of the pluractional verb is that of a repeated action over a course of time. Drops of water are continually falling downward in (10), and horses or people are falling down and dying while the protagonist acts in (11). In (12), the iterative action of people falling down dead may be interpreted as either a) spanning the range of time during which the subjects are stopped at the river, or b) occurring each time the subjects cross the river. In (13) and (14), the presence of the temporal phrase *massa xaana* 'all the time' forces iterative readings of the pluractional verbs.[4] Finally, the most likely reading of (15) is that of a mountain that regularly drops loose rocks.

The remaining 9 tokens of pluractional 'fall' with plural absolutive arguments, however, do not yield iterative readings. In (16), which parallels (13) and (14), an iterative reading would mean that the books accidentally, repeatedly fell from Musa's hands over a period of time. Since nothing in the sentence context supports this rather strange interpretation, it appears that the pluractional marking on 'fall' is due solely to the presence of a plural absolutive argument, namely 'books.' The best interpretation of the pluractional *lieg* in (16), therefore, is that the act of "falling down" is a temporally-contained action *distributed* among multiple participants:

(16) | *Muusaai* | *biera* | *kinashjkaazh* | **waliigar.** |
|---|---|---|---|
| Musa.GEN | hand.ABL | book.PL | down-fall:PLC.WP |

The books fell from Musa's hands. (Musa inadvertently dropped the books.)

(17-20) present additional examples of sentences about falling books with distributive pluractionals. In none of these is there any indication that the action is repeated over a period of time:

(17) | *Sy* | *kinashjkaazh* | **wa-liigar.** |
|---|---|---|
| 1s.GEN | book.PL | down-fall:PLC.WP |

My books fell down.

(18) | *Aaz* | *kinashjkaazh* | **waliegadar.** |
|---|---|---|
| 1sg.ERG | book.PL | down-fall:PLC-D.CS.WP |

I dropped the books. / I knocked the books down. (The books fell down and I caused it.)

(19) | *Sy* | *mel* | *dola* | *kinazhjkaazh* | **waliigar.** |
|---|---|---|---|---|
| 1s.GEN | how much | D.be.PPL | book.PL | down-fall:PLC.WP |

All the books I had fell down. (E.g. fell off the shelf.)

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[4]Unfortunately, without a consultant it is impossible to determine whether (13) and (14) mean that Musa i) drops a single, different book each time, or ii) drops a stack of books each time. It would also be interesting to investigate whether a sentence like *Muusaaz massa xaana leatta* **kinashjka** *waliegadu* "Musa keeps dropping the **book**(sg.)" means that he drops a single book and then picks it up, repeating this action for the exact same book over a period of time.

(20) *Derriga* *kinazhjkaazh* **waliigar**.
    D.all   book.PL   down-fall:PLC.WP

     All the books fell down.

The clearest distributive readings of pluractional *lieg*, however, are found in narrations of the "Pear Story" film elicited from Ingush speakers. In a scene from this video, a boy is riding a bicycle with a basket of pears perched on the rack. When his bicycle hits a rock in the road and falls over, an approximately 3-second segment shows the basket falling off the bike and spilling the pears out onto the road. Although this action is short and temporally-contained, 4 speakers used pluractional *lieg* to describe the motion of the pears. (Other speakers chose variants of the words for 'spill' and 'go.') Since an iterative reading would mean that the pears repeatedly fell down over a period of time, it seems that the pluractionality of the verb in these examples must be attributed to a distribution of the "falling" action across the multiple pears:[5]

(21) *Quorash* *'a* **woliigar**.
    pear.PL   and   down-fall:PLC.WP

     The pears fell down too.

(22) *Quorash* *'a* **walieg**   *cun.*
    pear.PL   and   down-fall:PLC.PRS   3s.DAT

     The pears fall down (him).

(23) *Qoorash* **wolieg**   *bierig* *'a*   *chyra.*
    pear.PL   down-fall:PLC.PRS   all   and   in.ABL

     The pears fell down from (basket).

(24) *Woviezhachul*   *t'ehwa* *bierig* *quorash* **dwaliigaa**...
    down-V.fall.PPL.NZ.CSN   after   all   pear.PL   DX-fall:PLC.PRF

     After he fell, all the pears fell down.

3   Exception to Plural Absolutives

As mentioned in the previous section, only one verb out of the 16 tokens of pluractional *lieg* appears with a singular absolutive argument. The sentence in which it occurs utilizes a type of Ingush relative clause construction that can be diagrammed as follows:

Intransitive Main Clause

[*miel / mel*	$\emptyset_i$	Verb1]	S_i	Verb2
"how much"	(null subject)	(marked for S's gender)	ABS sg	(marked for S's gender)
"*S* - however many that *Verb1 - Verb2*."				
e.g. "The dogs - however many that whine - eat first." or "All the dogs that whine eat first."				

Transitive Main Clause

[*miel / mel*	$\emptyset_i$	Verb1]	O_i	Verb2	A
"how much"	(null subject)	(marked for O's gender)	ABS sg	(marked for O's gender)	ERG
"*A Verb2 O* - however many that *Verb1*."					
e.g. "I feed the dogs - however many that whine" or "I feed all the dogs that whine."					

     Sentences with this construction tend to have a singular absolutive in the main clause,[6] even though the sense is clearly plural. In the following example, the English translation calls for "towers," despite that fact

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[5] For the sake of clarity, I have modified DX-fall:PLC.PRF in (24) from the originally-transcribed *dghaliigaa* to the standard spelling *dwaliigaa*. *Chur* in (23) has also been corrected to *chyra*.

[6] Though see example (19) for an unexplained exception to this generalization.

that the main clause noun modified by the embedded *mel* is the absolute singular *ghaala* 'tower,' instead of the plural *ghaalazh* 'towers':

(25) *Yshtta*   *xannad,*   *cu*   *loama=chy*   **mel**   *Ø$_i$*   *joa*   **ghaala$_i$**
      thus.FOC   be.NW.D   [DEM.OBL   mountain=in   how much   (null)   J.be.PPL]   tower(J)

      jettaar   *yz*   *Gii*   *vy,*   *T'umxoi*   *Gii*   *jaaxazh*   *xannuu.*
      J.build.PPLpst.NZ   DEM   Gii   V.be.PRS   T'umxoi (clan) Gii   call.CVsim   be.NW.V

      So, all the towers in these mountains were built by Gii, T'umxoi Gii.
      (lit. "So, the towers - however many are in these mountains - were built by Gii, T'umxoi Gii.")

The fact that the embedded clause verb *joa* (J.be.PPL) is marked for gender agreement with the main clause *ghaala* 'tower(J)' indicates that *ghaala* is coreferential with a null absolutive argument in the embedded *mel* clause.

  Another sentence in the corpus contains *miel...sag* 'how much...person,' where *sag* is an absolutive singular in the main clause that is rendered as "people" in the translation. As with the previous example, the verb in the embedded clause is marked for gender agreement with a null subject that is coreferential with *sag* in the main clause:

(26) *Aara*   **miel**   *Ø$_i$*   *vola*   **sag$_i$**   *hwa-viexalahw*   *voa.*
      [outside   how much   (null)   V.be.PPL]   person(V)   DX-V.call.IMPV   V.be.PPL

      Call in everyone who's in the yard. / Call everybody in from the yard. / Invite in whoever is in the yard.
      (lit. "However many are outside, call those people.")

The exceptional sentence mentioned at the beginning of this section uses this construction in the form of *miel...quor* 'how much...pear,' rendered in the English as "pears":

(27) *Cu*   *korzinkachura*   *wa*   **miel**   *Ø$_i$*   *liiga*   **quor$_i$**   *hwagulboa*
      [DEM   basket.ABL   down   how much   (null)   fall:PLC.CVant]   pear(B)   DX-pick.B.PRF

      caar.
      3p.ERG

      They picked up the pears that fell down from the basket.
      (lit. "They picked up the pears - however many that fell down from the basket.")

The embedded clause verb in (27) is a form of the pluractional *lieg* 'fall,' despite the fact that its null absolutive argument is coreferential a singular noun, that is, the main clause *quor* 'pear.' This is an anomaly, given that every other example of pluractional *lieg* in the corpus takes a plural absolutive argument, as described in section 2.2. As it stands, the reading of the pluractional *lieg* in (27) with a singular absolutive argument should be iterative, but that would be inconsistent with the scene being described: a group of pears falling within the span of a few seconds. The speaker, however, chooses not to use the simulfactive *b.uozh* instead of the pluractional *lieg* in (27), although he/she does so another portion of the narrative:[7]

(28) *Cu*   *chu*   *miel*   *Ø$_i$*   *boalla*   *quor$_i$*   **waboozh**
      [DEM   inside   how much   (null)   B.be contained.PPL]   pear(B)   down-B.fall.PRF

      laet.
      ground.ADV(?)

      All the pears which were inside [of the basket] fell down.
      (lit. "The pears - however many were inside - fell down.")

Like (27), the sentence in (28) utilizes the *miel...*[sg. N] structure, but the 'fall' verb of (28) appears in the main clause and is simulfactive (*waboozh*), while the 'fall' verb of (27) appears in the embedded clause and is pluractional (*wa...liiga*).

  The disparity of simulfactive/pluractional between (27) and (28) finds a possible explanation in the conflicting interaction of distributive pluractionality and the *miel...*[sg. N] construction with respect to speech

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[7]*Boal* in (28) has been corrected to *boalla*.

planning. That is, distributive pluractionality and the *miel...*[sg. N] construction work at cross purposes, and which one "wins" is determined by the order in which they are produced by the speaker. Consider the disparate sequencing between (27) and (28), illustrated in the following diagrams:

(27) | ... | *miel* | embedded verb: pluractional 'fall' | sg. noun *quor* | main verb | agent |

(28) | ... | *miel* | embedded copula | sg. noun *quor* | main verb: simulfactive 'fall' | adverb |

In (27), the speaker is able to (subconsciously) choose a form for the 'fall' verb before he/she must produce the singular noun complement to *miel*. In keeping with the observed scene of multiple pears falling at once, the speaker selects the pluractional *lieg* for the purpose of conveying a distributive reading. Only after *lieg* has been produced does he/she produce the required singular *quor*. Because the embedded 'fall' verb is ordered prior to *quor* in the sequence of speech production, it is unhindered by the strong inclination for a singular absolutive argument to pair with simulfactive G.*uozh*.

In (28), however, the speaker finishes producing the *miel...quor* structure before being faced with the choice of simulfactive/pluractional for the 'fall' verb. The speaker is now aware of the absolutive singular *quor* and avoids the pluractional *lieg* because of the inappropriate iterative reading that combination would yield. He/she must instead produce the simulfactive G.*uozh*, because the singular *quor* has "forced his hand," so to speak.

This account preserves the generalization of pluractional+plural and simulfactive+singular pairings observed in the corpus data by attributing the presence of a singular absolutive in (27) to the mechanics of speech planning. Given the ability of Ingush speakers to ably handle such complicated structures as long distance reflexivization, however, it is possible that such an account is too simplistic. Verification of this hypothesis, therefore, awaits further investigation.

4 Proposal & Conclusion

Having taken care of the problematic exception in (27), we may now consider a unified explanation for the two generalizations present in the corpus data regarding the Ingush verb 'fall,' listed here:

1. Simulfactive G.*uozh* takes an absolutive argument in the singular, while pluractional *lieg* takes an absolutive in the plural.[8]

2. A majority of the instances of pluractional *lieg* yield distributive readings, while a minority allow iterative interpretations.

These results suggest a shrinking of the set of available readings for argument-verb combinations, as depicted in the following diagrams:

Expected set of readings

	simulfactive G.*uozh*	pluractional *lieg*	
singular abs. arg. *S*	"*S* falls once."	"*S* falls repeatedly."	(iterative)
plural abs. arg. *S*	"Multiple *S*'s fall once."	"Multiple *S*'s fall repeatedly."	(iterative)
		"Each *S* in a group falls once."	(distributive)

Actual set of readings

	simulfactive G.*uozh*	pluractional *lieg*	
sg. abs. arg. *S*	"*S* falls once."		
pl. abs. arg. *S*		"Multiple *S*'s fall repeatedly." [**less common**]	(iterative)
		"Each *S* in a group falls once." [**common**]	(distributive)

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[8]To verify that this split is not a general property of simulfactive/pluractional verbs (and therefore not specific to 'fall'), a sketchy corpus search was performed on ~20 other pluractional verbs, all of which were found to allow singular absolutive arguments.

It appears that pluractional *lieg* is moving towards an exclusive reading of distributive pluractionality with plural arguments, while simulfactive G.*uozh* is already restricted to singular arguments. This raises the question of whether the end result of this trend - a pluractional verb that has lost its iterative reading and yields only distributive interpretations - can be distinguished from an actual *plural verb*. I therefore propose that the simulfactive/pluractional pair of G.*uozh/lieg* is in the process of becoming a singular/plural verb pair, if such a transformation is possible.

The singular/plural verb pairs in Ingush constitute a very small subset (~20 members) of all verbs (~400), and already include a few suppletive forms, such as *ull* 'lie' (sg.) / G.*aada* 'lie' (pl.). Although verbs in Ingush are a strictly closed class that accepts no new members, it is conceivable that a simulfactive/pluractional pair, due to the prevalence of a distributive reading for the pluractional member, could begin to be interpreted as a singular/plural pair. If this is indeed the case and distributive pluractionality the correct causal factor, one would expect it to be a one-way process, moving simulfactive/pluractional pairs toward the class of singular/plural pairs but not vice versa.

This hypothesis is admittedly sketchy, and requires the support of consultant research to be viable. Additional investigation should also take into account the effects of tense and Aktionsart in the analysis of verb tokens, which have been neglected in this study. I believe this tentative conclusion is sufficiently stimulating, however, as a launching point for further research into the unique behavior of the Ingush G.*uozh/lieg* verb pair.

References

Nichols, Johanna. 2007-. *Ingush Language Project*. UC Berkeley.

Wood, Esther J. 2007. *The semantic typology of pluractionality*. Unpublished Ph.D. dissertation, UC Berkeley.

Yu, Alan. 2003. Pluractionality in Chechen. *Natural Language Semantics* 11.289-321.