There is no MEAS, only MUCH: the case of *3kg of NP*, Luis Miguel Toquero-Pérez — *USC*

1.Background. Measure nouns such as *kilo* are found in (pseudo)-partitive constructions like (1) where they "mediate" between a number/degree and a mass or count plural noun.

(1)   two kilos of cashews

Starting since at least Krifka (1989), it has been proposed that these nouns lexically introduce a measure function μ whose dimension is determined by the noun itself, i.e. *the weight of cashews in terms of kilos = 2*. Other proposals treat these expressions as quantifiers of type $\langle d, \langle dt, t \rangle \rangle$ over degrees of dense dimensions (Ahn and Sauerland 2015; Pasternak and Sauerland 2021), but the nouns themselves do not encode the measure function. Instead, they assume the presence of a null measure morpheme MEAS (Scontras 2013; Rett 2014; Solt 2015) — or sometimes even two, Pasternak and Sauerland (2021, cf.) — that both introduces μ and acts as a type-shifter for semantic compositionality.

2.Skepticism. In this talk, I argue that there are reasons to be skeptical about both types of approaches. (i), these proposals presuppose a lexical ambiguity for these nouns: $kilo^1$ as a predicate of individuals and $kilo^2$ as a measure word or degree quantifier. In fact, Wellwood (2019) has argued that no lexical item encodes degree semantics. (ii), they require enlarging our inventory of measure morphemes, a move which is not supported by any morpho-syntactic evidence. (iii) Quantifiers cannot co-occur — e.g. *some every man —, but if *kilo* is a degree quantifier and so is *much/many* (cf. Solt 2015; Rett 2014), their co-occurrence is unexpected: *many kilos*.

3.Only MUCH. I propose that all measurement is uniquely introduced by MUCH in those languages where there is independent evidence for such a morpheme, following Wellwood (2015, 2019). MUCH is underlyingly present in a great amount of degree constructions including gradable adjectives as in (2), (Bresnan 1973; Corver 1997; Wellwood 2015). If expressions like (1) also include MUCH, we would expect to see it surface in some of these environments, such as degree questions. This is borne out as the English and Spanish data in (3) show: MUCH, in its surface forms, is probing for the "amount" in terms of kilos regardless of the morpho-syntactic plurality.

(2)   Lexi is tall but I wonder how *much* so.   (*so = tall*)

(3)   a. {How *much*/ How *many* kilos of cashews} did Max buy?

       b. {Cuánto/   Cuánt-os   kilos} compró Max de anacardos?
           how.MUCH/ how.MUCH-M.PL kilos   bought Max of cashews

Likewise, in pronominal degree constructions in which the demonstrative refers to a number, MUCH must also be present to mediate between the pronominal degree and the measure NP:

(4)   a. Max bought 3 kilos of cashews. Mary bought that *many* kilos of meat too.

       b. Max compró 3 kilos de anacardos. María compró (es-os)   *tantos*   kilos también.
           Max bought 3 kilos of cashews.   María bought this-M.PL MUCH-M.PL kilos too

4.Analysis. MUCH introduces an underspecified measure function μ whose dimension DIM is resolved relative to what is being measured, e.g. *kilo*, (Wellwood 2015, 2019; Solt 2018). *of* is a partitive preposition (Pancheva 2006): it takes a predicate of a plural or mass individual x' (of type $\langle e,t \rangle$), and returns a set of individuals (of type $\langle e,t \rangle$) who are part of x'. In the talk I argue that (1) has the structure in (6), whose interpretation is as in (7).

(5)   a. $[\![\text{MUCH}]\!] = \lambda d.\lambda P_{\langle \alpha,t \rangle} \lambda \alpha.\mu_{\text{DIM};P}(\alpha) \geq d$ b. $[\![\text{of}_{\text{part}}]\!] = \lambda P_{\langle e,t \rangle}.\lambda y[y \sqsubseteq P]$

(6)   [NP [NP [DegP *3* [Deg' MUCH]] [N' *kilos*]] [PP *of cashews*]]

(7) $[\![3 \text{ MUCH kilos of cashews}]\!] = \lambda y.[y \sqsubseteq cashews]$ & $\mu_{\text{WEIGHT};kilo}(y) \geq 3$
       'There is a subplurality of cashews whose weight in terms kilos is 3'

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