Information density constrains article omission

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Article omission (AO) can be observed in specific text types, e.g. in newspaper headlines (1a), while in standard (written) German the article before the NP *Elfometerschießen* needs to be realized. AO is not obligatory in headlines though, so what drives the choice for or against AO?

(1)  
Portugal nach ∅ Elfometerschießen im Halbfinale  
‘Portugal after ∅ penalty shoot-out in semi-finals’

We pursue the hypothesis that, AO is guided by Uniform Information Density (UID, Jaeger, 2010) where it is allowed by grammar (Reich, to appear). UID implements a preference for distributing information uniformly across the utterance: As articles lower the information on the head noun, UID predicts a stronger preference for AO the more predictable the noun is.

(2)  
Franziskus unterstützt (das/∅) (Projekt/Klage) gegen Kinderarbeit  
‘Franziskus supports (the/∅) (project/action) against child.labor’

We investigated the effect of surprisal on AO with an acceptability rating study on postverbal nouns in constructed headlines as (2). Items appeared either with a predictable (*Projekt, S = 4.27*) or an unpredictable noun (*Klage, S = 11.12*) preceded by an article in 50% of the trials. Noun surprisal was computed from verb-noun pairs extracted from DeReKo (Kupietz & Keibel, 2009). A significant interaction between Surprisal and AO (*z = 2.9, p < .01*) indicates that AO is preferred more strongly the less predictable the noun is. This confirms our hypothesis and is in line with previous research by Jaeger (2010) on complementizer deletion.

References:  
Reich, Ingo (to appear): On the omission of articles and copulae in German newspaper headlines. *Linguistic Variation* 17(2).