▸ LEV BUKOVSKÝ, *Balcar's theorem on supports.*
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We follow notations and terminology of [3]. Let M be an inner model of **ZFC**. A set $\sigma \subseteq D \in M$ is **a support** if there exists a binary relation $r \in M$ such that

$$P(D \setminus \sigma) \cap M = r``\sigma.$$

If $\preceq$ is a preorder on D then $\sim$ is the equivalence relation defined as

$$x \sim y \equiv (x \preceq y \wedge y \preceq x).$$

In [1] B. Balcar presented very nice proof of

THEOREM 1 (P. Vopěnka [4]). *If $\sigma \subseteq D \in M$ is a support then there exists a preorder $\preceq$ on D such that $\sigma/\sim$ is a filter on $\langle D/\sim, \preceq/\sim\rangle$ generic over M.*

In [2] we have proved the following modification of this result.

THEOREM 2. *If there exists a function $f : \mathcal{P}(D) \cap M \longrightarrow D$, $f \in M$ such that $P(D \setminus \sigma) \cap M = f_{-1}(\sigma)$ then there exists a preorder $\preceq$ on D such that $\langle D/\sim, \preceq/\sim\rangle$ is a Boolean algebra complete in M, $\sigma/\sim$ is a filter on $D/\sim$ generic over M and for any $u \subseteq D$, $u \in M$ we have*

$$[f(u)]_\sim = -\sum u/\sim = -\sum\{[x]_\sim : x \in u\}.$$

[1] B. BALCAR, *A theorem on supports in the theory of semisets*, ***Commentationes Mathematicae Universitas Carolinae***, vol. 16 (1973), no. 1, pp. 1–6.
[2] L. BUKOVSKÝ, *Balcar's theorem on supports*, ***Commentationes Mathematicae Universitas Carolinae***, vol. 59 (2018), no. 4, pp. 443–449.
[3] T. JECH, ***Set Theory***, Springer 2003.
[4] P. VOPĚNKA AND P. HÁJEK, ***The Theory of Semisets***, Academia Prague 1972.