In my conception of gauge-gravity I have a displacement algebra and a gauge algebra. In the case in which there is an overlap between these algebras, i.e.

$$\mathfrak{A} \cap \mathfrak{B} \neq \emptyset$$

we have noncommutativity. The details of the argument proving this is provided in the Chinese gauge theory book.

The remarkable thing is that, in the limit in which

$$\mathfrak{A} = \mathfrak{B}$$

we get classical gravity whereas, if

$$\mathfrak{A} \cap \mathfrak{B} = \emptyset$$

we get classical electrodynamics

$\mathfrak{A} \cap \mathfrak{B} = \emptyset \rightarrow$ Electrodynamics.

$\mathfrak{A} = \mathfrak{B} \rightarrow$ Teleparallel gravity.

i) $\mathfrak{A} \cap \mathfrak{B} \neq 0$

ii) $\mathfrak{A} \neq \mathfrak{B}$ $\rightarrow$ Noncommutative Yang-Mills should have extended objects.