



MACROS

Under the micro lens



LAST NIGHT I DRIFTED OFF
WHILE READING A LISP BOOK.



SUDDENLY, I WAS BATHED
IN A SUFFUSION OF BLUE.

AT ONCE, JUST LIKE THEY SAID, I FELT A
GREAT ENLIGHTENMENT. I SAW THE NAKED
STRUCTURE OF LISP CODE UNFOLD BEFORE ME.



THE PATTERNS AND METAPATTERNS DANCED.
SYNTAX FADED, AND I SWAM IN THE PURITY OF
QUANTIFIED CONCEPTION. OF IDEAS MANIFEST.

TRULY, THIS WAS
THE LANGUAGE
FROM WHICH THE
GODS WROUGHT
THE UNIVERSE.



NO, IT'S NOT.



I MEAN, OSTENSIBLY, YES.
HONESTLY, WE HACKED MOST
OF IT TOGETHER WITH PERL.

MACROS

- are a way to modify a program during compile time.
- are functions that run at compile time,
 - unevaluated s-expressions => modified s-expression evaluated at run-time
- lisp = list processing

(= CODE DATA)

DIFFERENCES FROM FUNCTIONS

- Arguments to a function are evaluated before the function call, arguments to a macro are unevaluated s-expressions
- Functions are evaluated inside out, while macros are evaluated outside in.
- Macro evaluation happens at compile-time, while function execution happens at run-time.

(OR MACROS (NOT MACROS))*

- Reducing syntax
- Compile-time optimisations
- Defining control structures
- Designing DSLs

** The use of macros is subject to a risk of increased complexity, please read the documentation carefully before investing*

REASONS TO NOT USE MACROS

- Increased complexity. (Runtime vs. Compile time)
- Macros are not first-class in Clojure.
- Data > Functions > Macros

The background is an abstract composition of overlapping squares and rectangles in various shades of red, orange, and pink. The colors range from deep, dark reds to lighter, almost white pinks, creating a layered, geometric effect. The text 'defmacro' is centered in a white, italicized serif font.

defmacro



‘ *quote*)



' (syntax quote)



~ (*unquote*)

The background is an abstract composition of overlapping squares and rectangles in various shades of red, orange, and pink. The colors are layered, creating a sense of depth and texture. The text is centered over this background.

~ @ (*unquote-splicing*)



(autogen sym)

EXAMPLES

THANK YOU