

Higher order procedures: Part 2

Umut Özge

COGS 502: Symbols and Programming
METU, Informatics

- ▶ Task: map a list of numbers to their factorials.

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- ▶ Task: take the procedure to use in mapping also as an argument.

```
1 (defun mapp (func lst) ;; WRONG!  
2   (if (endp lst)  
3       nil  
4       (cons (func (car lst))  
5             (mapp func (cdr lst))))))
```

FUNCALL wants its first argument to be something that would *evaluate* to:

- i. a symbol with a function binding; or
- ii. a function.

```
1 (defun mapp (func lst) ; STILL WRONG!  
2   (if (endp lst)  
3       nil  
4       (cons (funcall (function func) (car lst))  
5             (mapp func (cdr lst)))))
```

```
1 (defun mapp (func lst)
2   (if (endp lst)
3       nil
4       (cons (funcall func (car lst))
5             (mapp func (cdr lst)))))
```