Elliptical dependency

is
X≤A·B·X
if A·C·X is also
there then you
cant say that
theres an ambiguity

LISP

arg

(CAR (A B C))

retval

to signify a function

(A B C D)

List

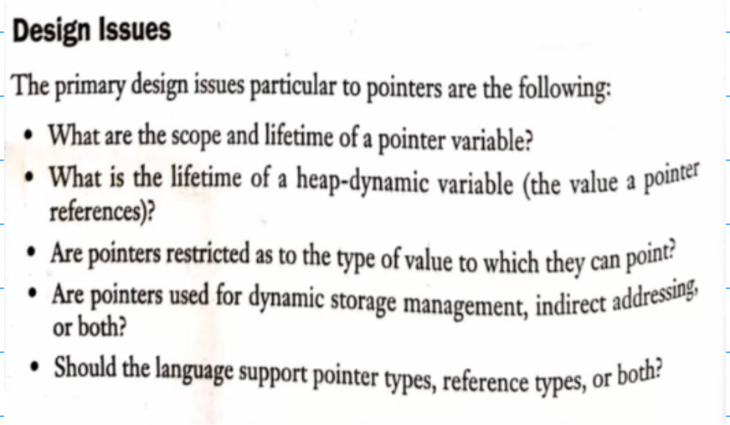
union flextype{
int intEl;
float floatEl; };

→ free unions in C

ALGOL 68 : discriminative unions
(typechecking)

flextype f;
f.intEl = 27
f.floatEl = 27.8 // we dont typecheck

Pointers (indirect addressing)



Design Issues

The primary design issues particular to pointers are the following:

- What are the scope and lifetime of a pointer variable?
- What is the lifetime of a heap-dynamic variable (the value a pointer references)?
- Are pointers restricted as to the type of value to which they can point?
- Are pointers used for dynamic storage management, indirect addressing, or both?
- Should the language support pointer types, reference types, or both?

Ptr are heap dynamic variables.

dangling pointer : contains address of heap dynamic variable which has been de-allocated.