Der neue Gforth-Header

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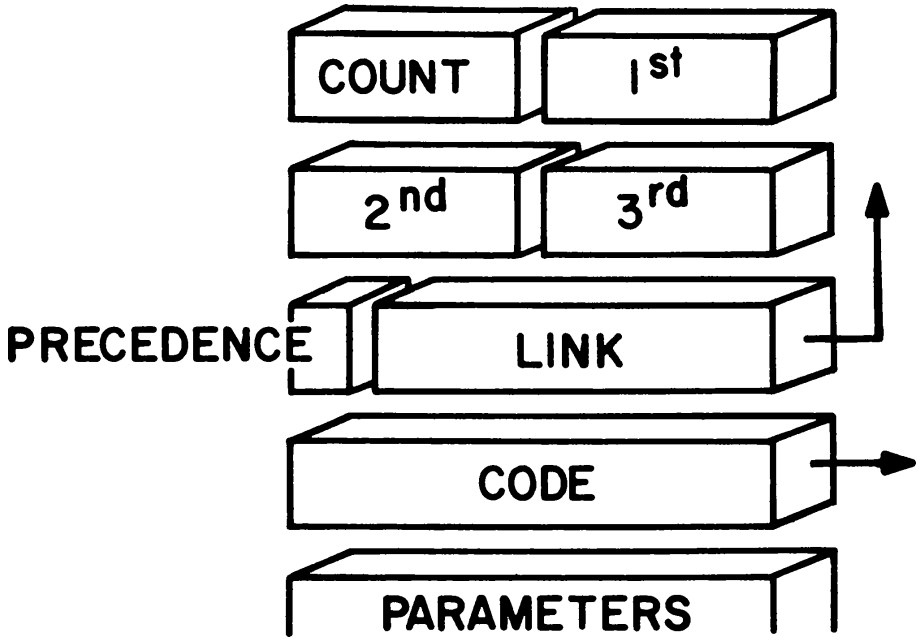
Der ursprüngliche Forth-Header



Charles H. Moore. Forth: A new way to program a mini-computer. *Astron. Astrophys. Suppl.*, 15:497–511, 1974.

Weitere Anforderungen $\Rightarrow$ Alter Gforth-Header

- Lange Namen
- `alias` $\Rightarrow$ alias-Bit
- `compile-only` $\Rightarrow$ restrict-Bit
- `interpret/compile:` $\Rightarrow$ spezielles Code Field

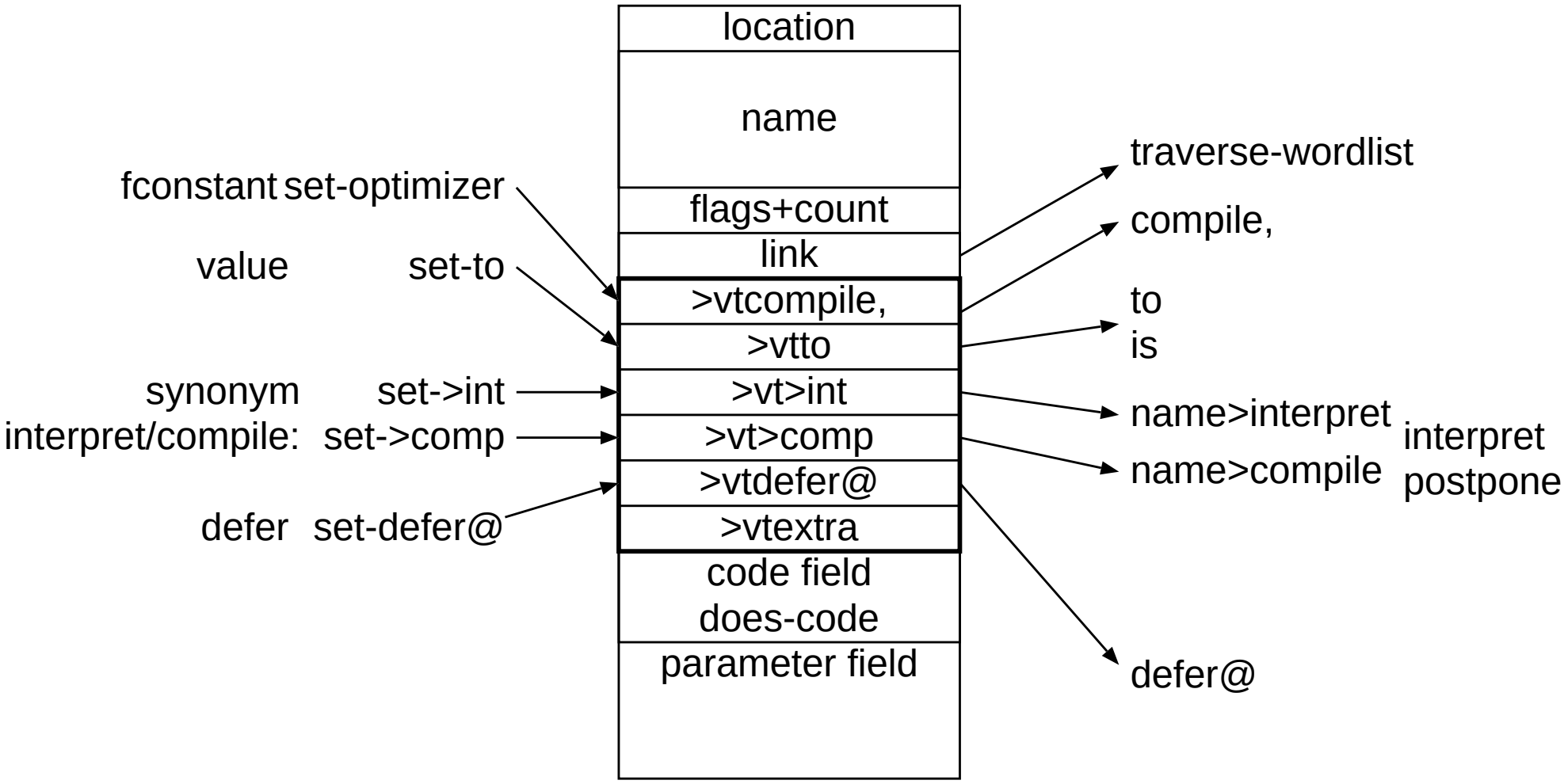
$\Rightarrow$ viele `ifs`

Noch mehr Anforderungen

- Dual-semantics (`s"`)
- `locate`
- `synonym`
- `to` für value fvalue 2value locals
- Varianten von `defer` (z.B. `udefer`)
- intelligent `compile,`

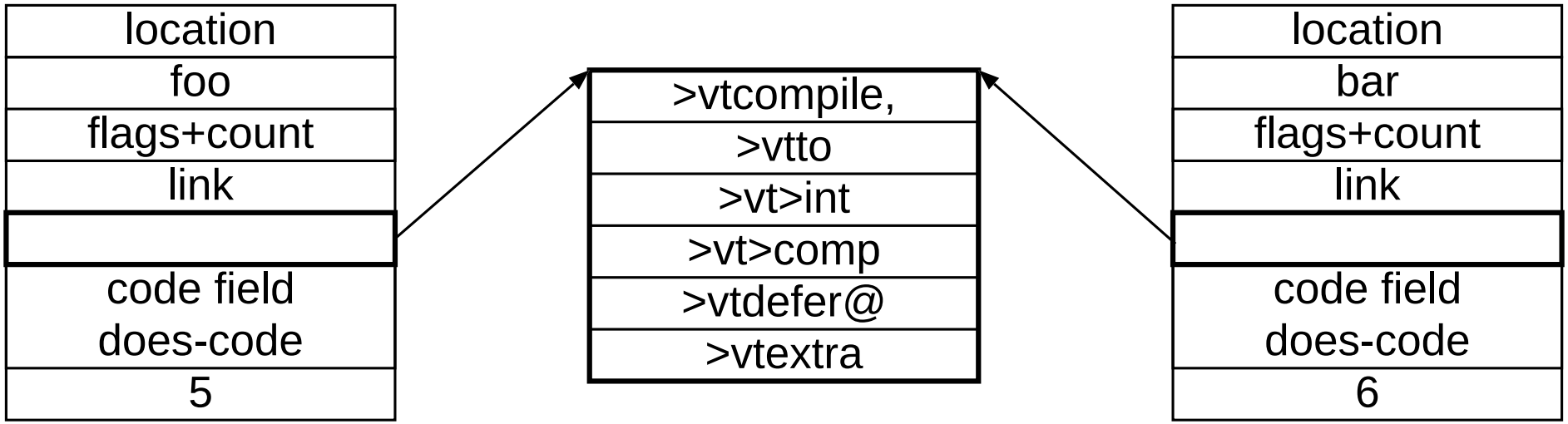
$\Rightarrow$ neuer Header

Der neue Header (vereinfacht)



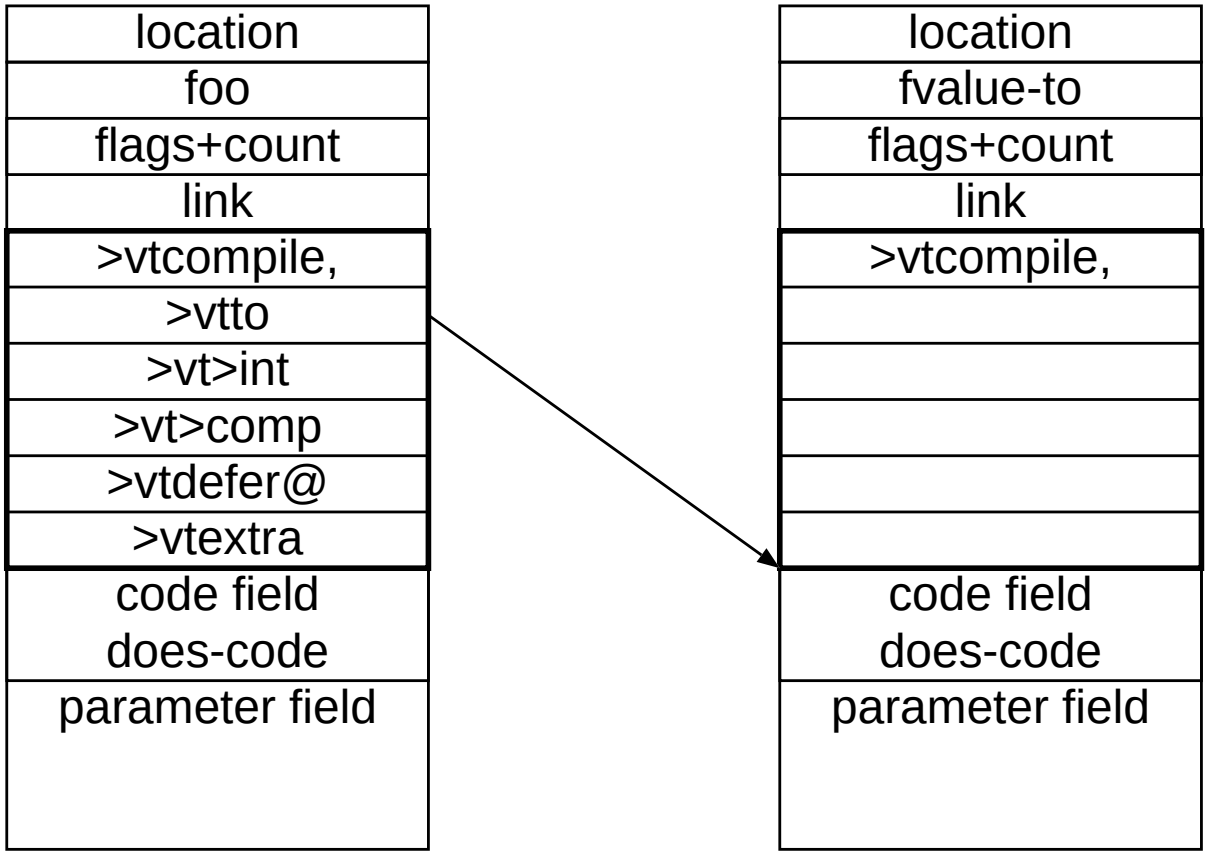
Deduplikation

5 value foo
6 value bar



TO

```
5e fvalue foo
6e to foo
: bar 7e to foo ;
```

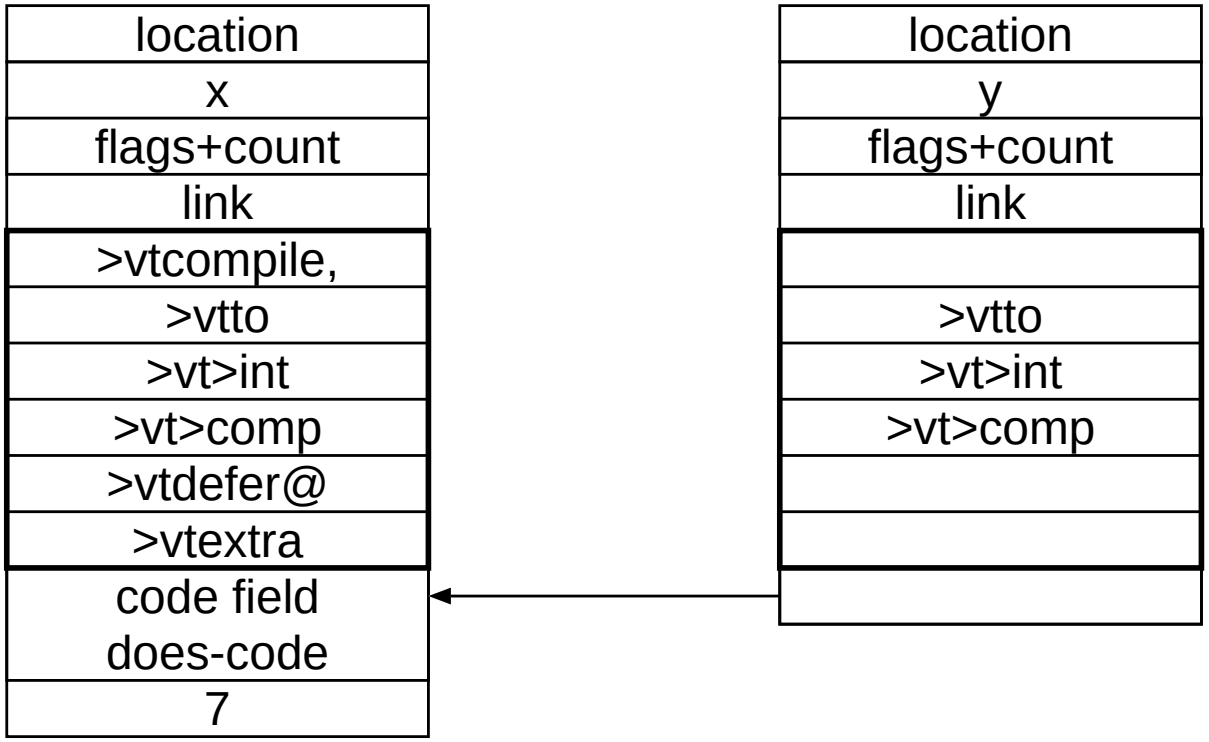


Code (vereinfacht)

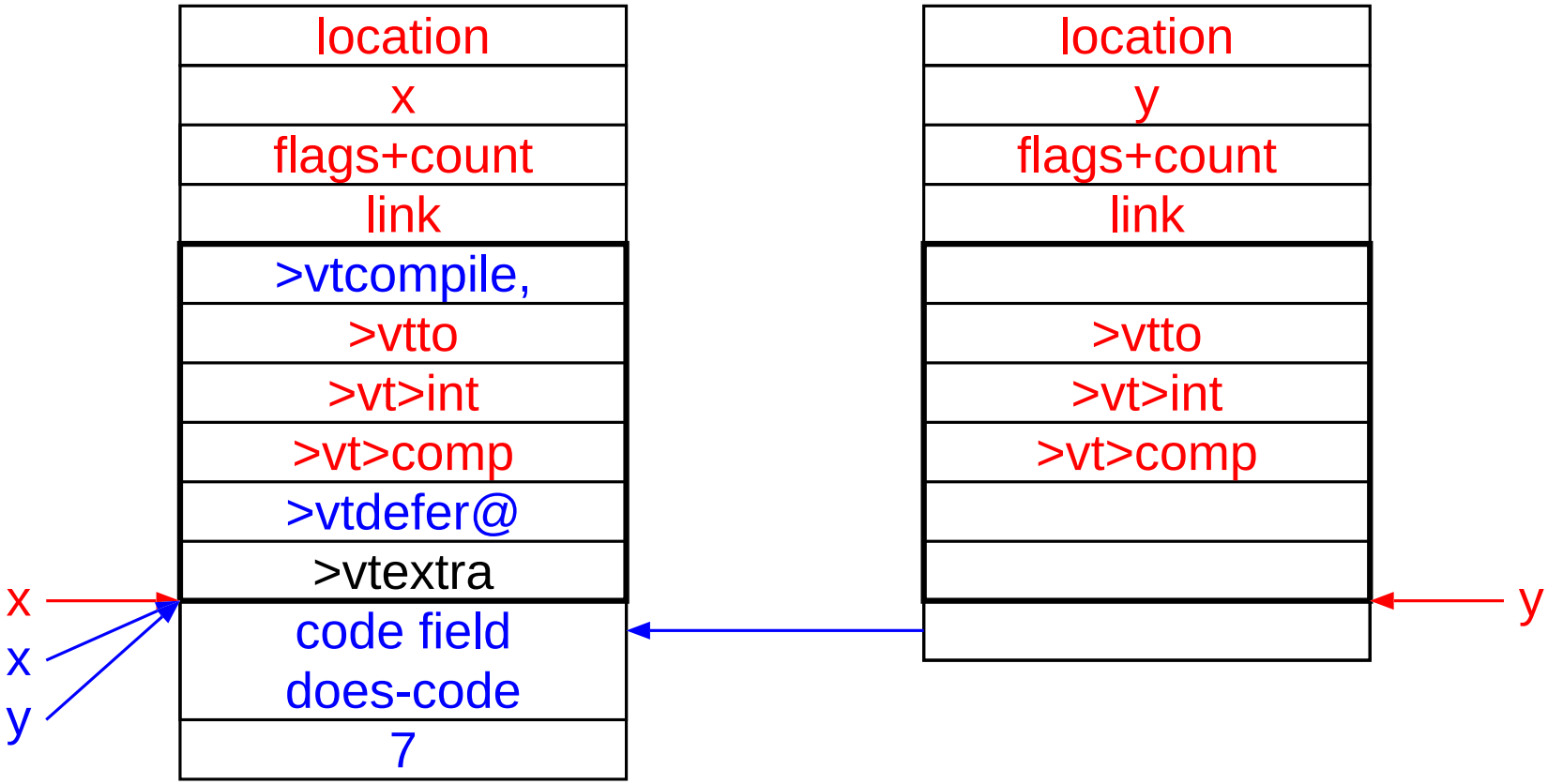
```
: fconstant  ( r "name" -- )
    create f,
    ['] f@ set-does>
    [: >body f@ POSTPONE fliteral ;] set-optimizer ;

to: fvalue-to ( r xt -- )
    >body f! ;
to-opt: ( xt -- ) >body POSTPONE literal POSTPONE f! ;

: fvalue ( r "name" -- )
    fconstant
    [: >body POSTPONE literal POSTPONE f@ ;] set-optimizer
    ['] fvalue-to set-to ;
```

Synonym

```
6 value x
synonym y x
7 to y
x . \ prints 7
```



NT, XT, Universal Token?



Zusammenfassung

- Prototyp-basierter objektorientierter Ansatz
- Methoden statt If-Kaskaden
- Methoden in vt ausgelagert, Deduplikation
- nt=xt, soweit möglich