



PROGRAMMAZIONE 2

6b. Le eccezioni, operazionalmente

```
class C {  
    public void via( ) {  
        primo( );  
        System.out.println("sei al via");  
    }  
  
    public void primo( ) {  
        secondo( );  
        System.out.println("sei al primo");  
    }  
  
    public void secondo( ) {  
        throw new Exception( );  
        System.out.println("sei al secondo");  
    }  
}
```

Cosa succede con (new C()).via();?



Abstract Stack Machine

Workspace

```
(new C()).via();
```

Stack

Heap



Abstract Stack Machine

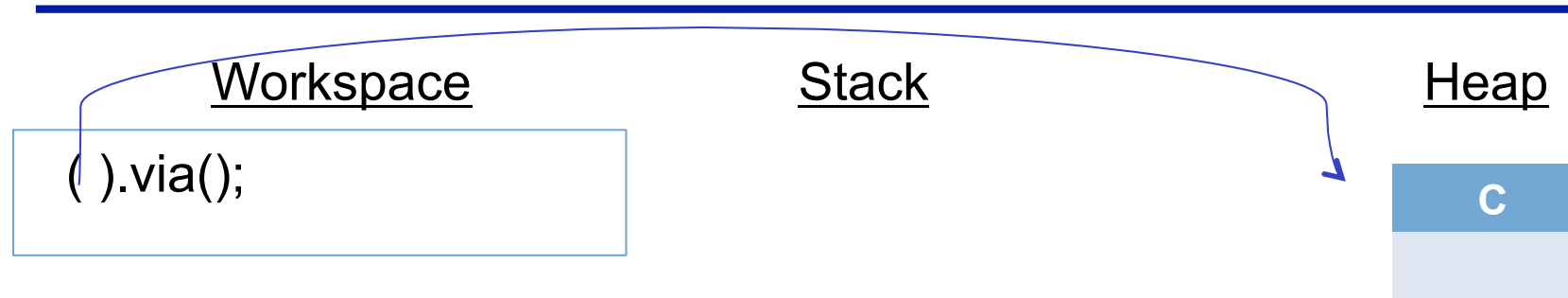
Workspace

```
(new C()).via();
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Stack

Heap

Abstract Stack Machine

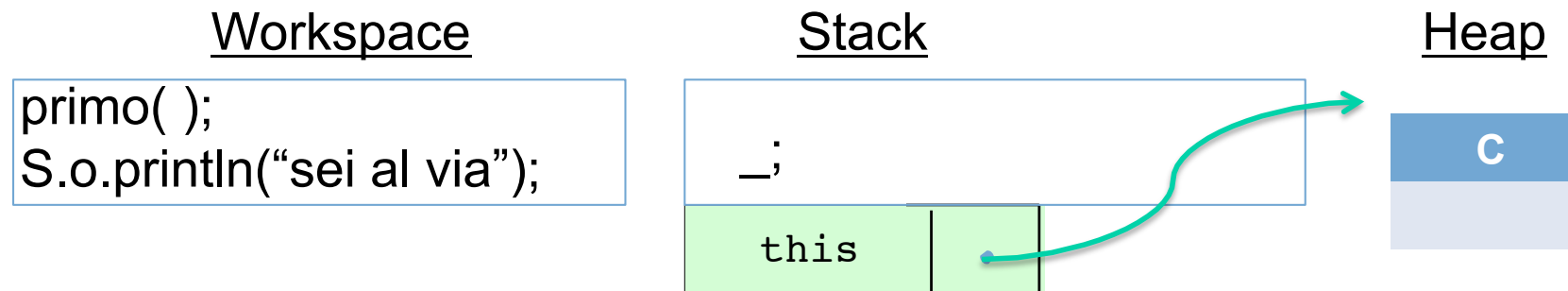


Allocata una istanza della classe C sullo heap

Abstract Stack Machine



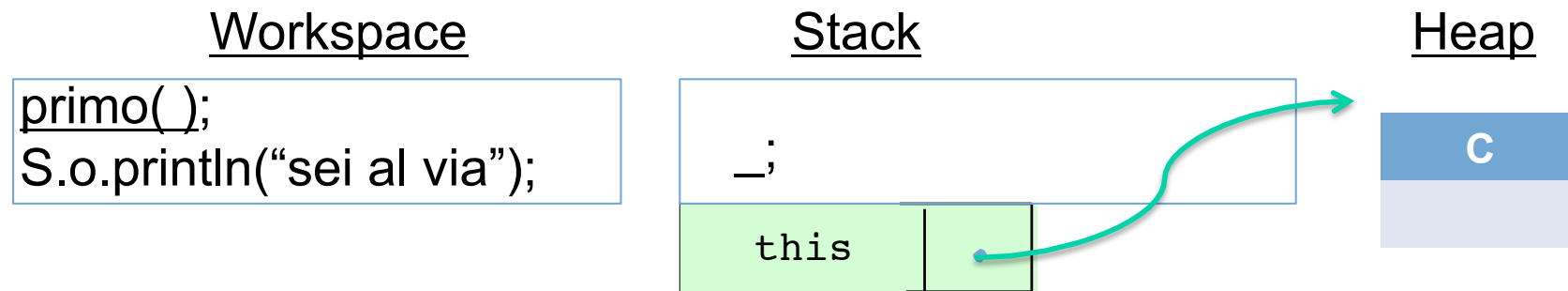
Abstract Stack Machine



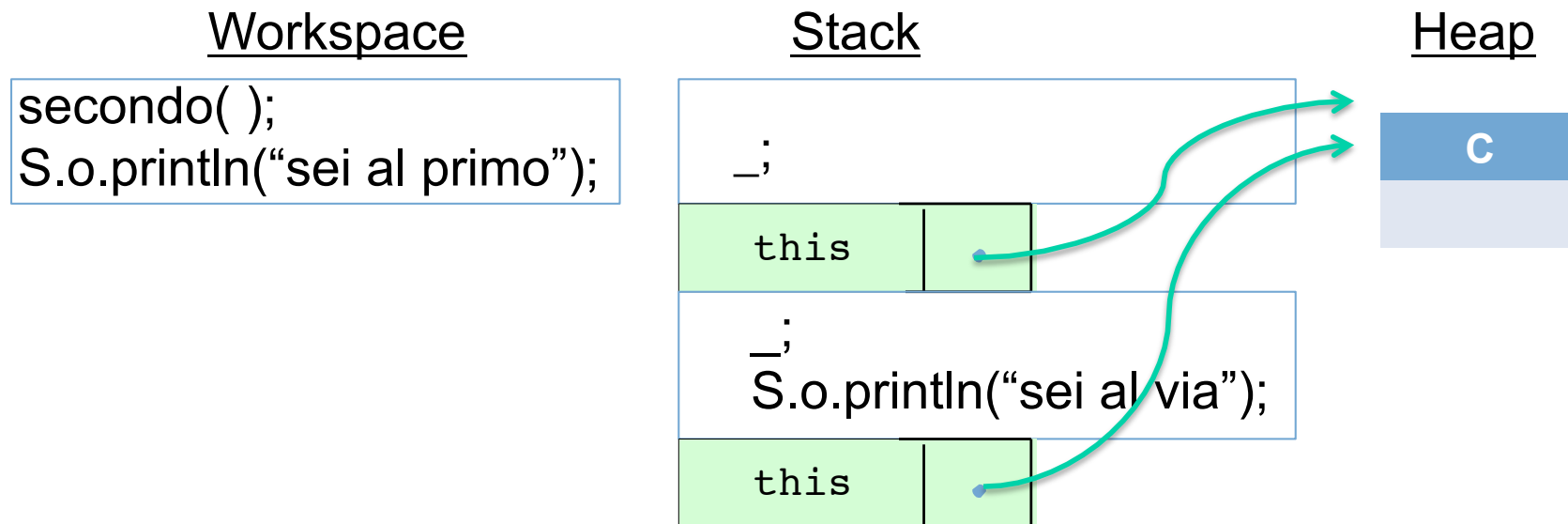
Viene salvato sullo stack la **continuazione** (cosa eseguire) dopo aver invocato “via”

Viene salvato sullo stack anche il valore corrente di `this`

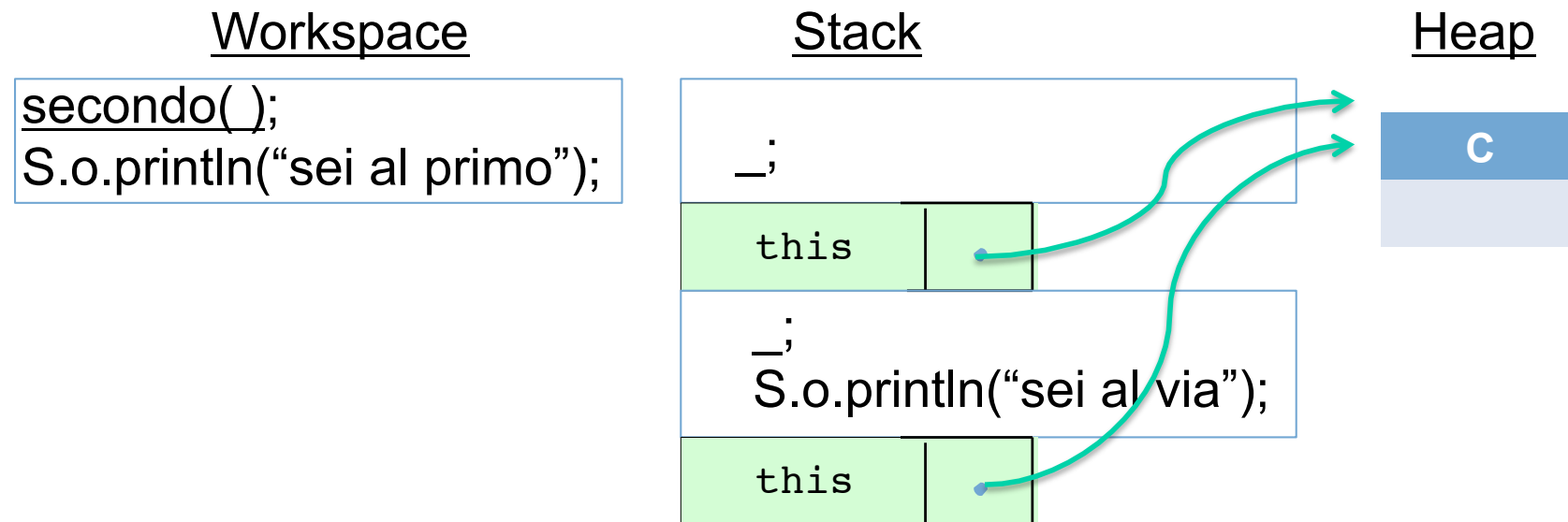
Abstract Stack Machine



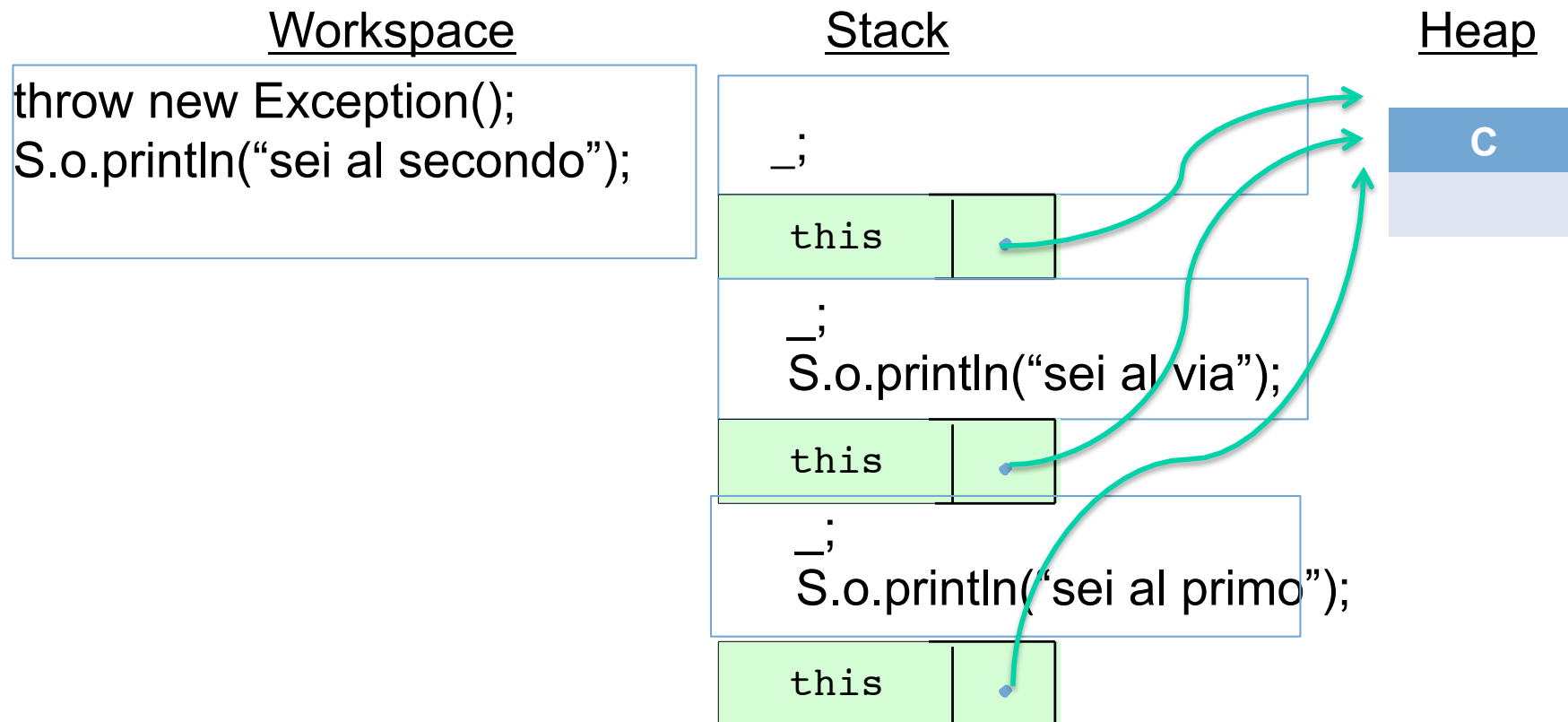
Abstract Stack Machine



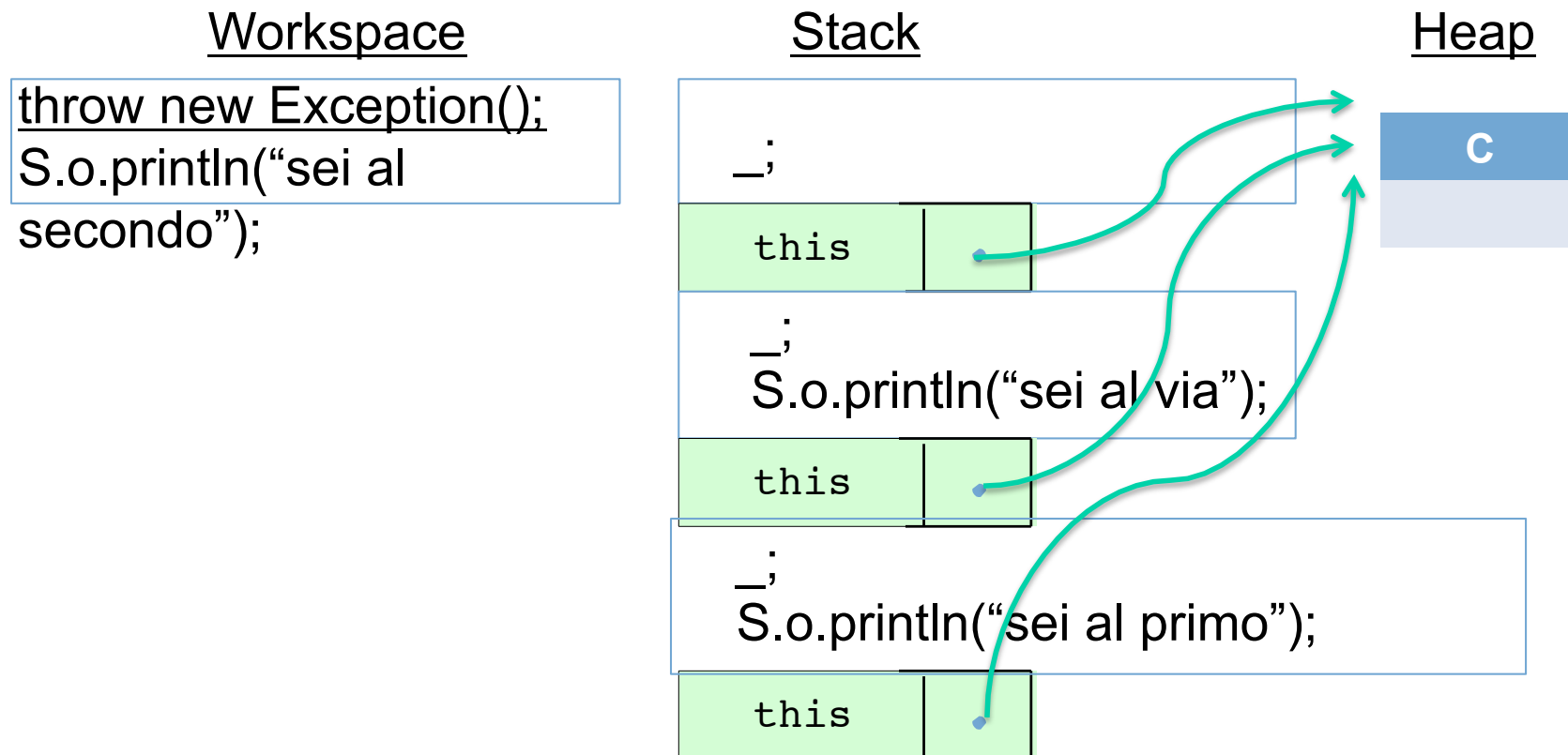
Abstract Stack Machine



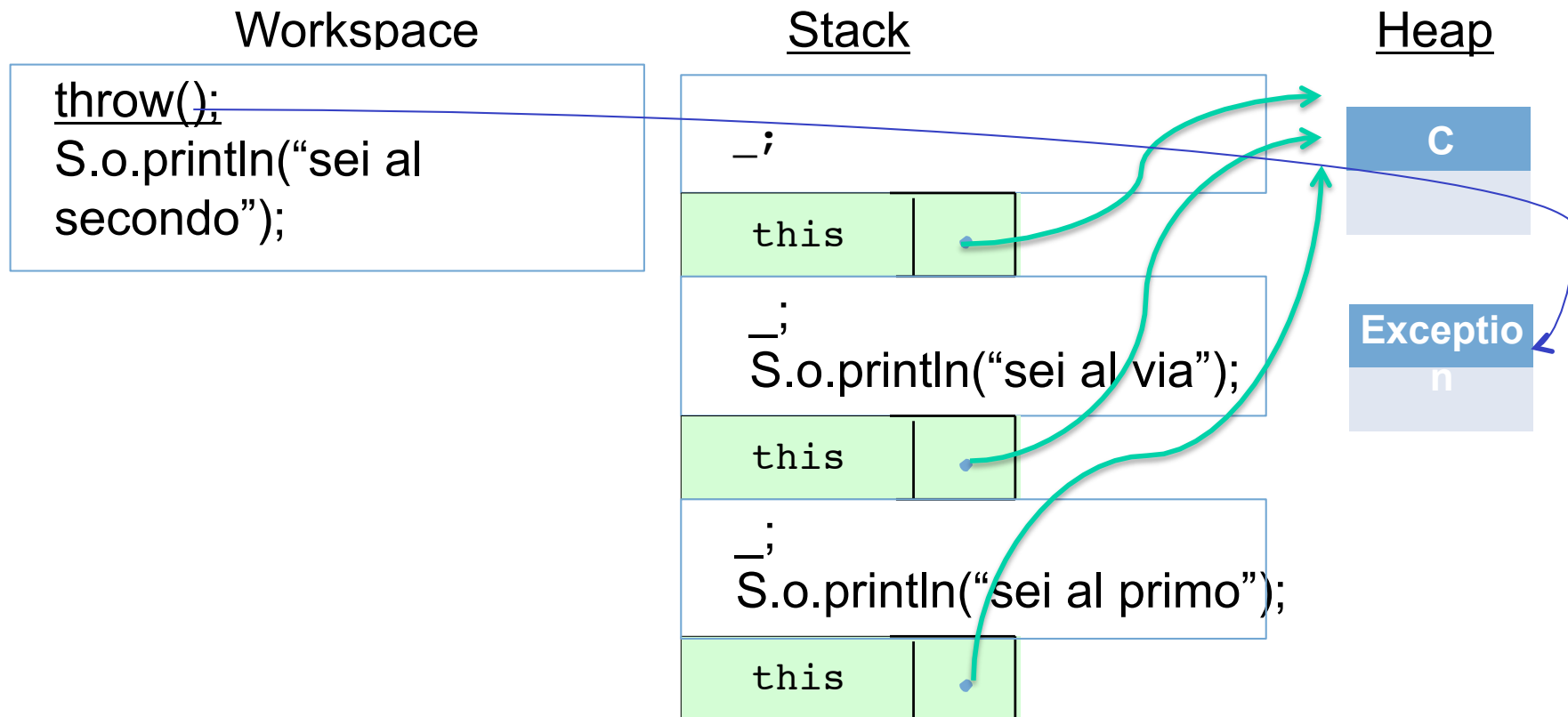
Abstract Stack Machine



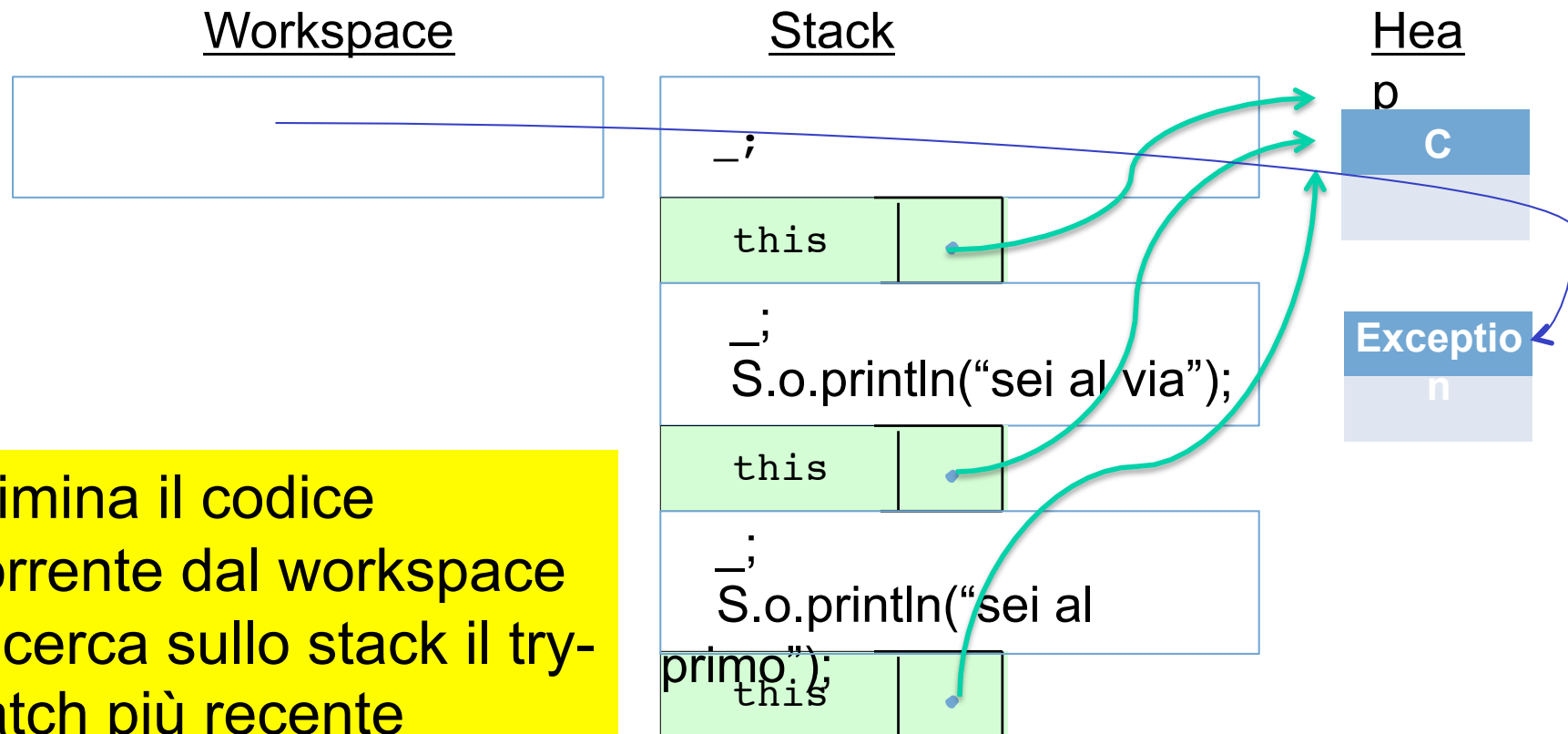
Abstract Stack Machine



Abstract Stack Machine

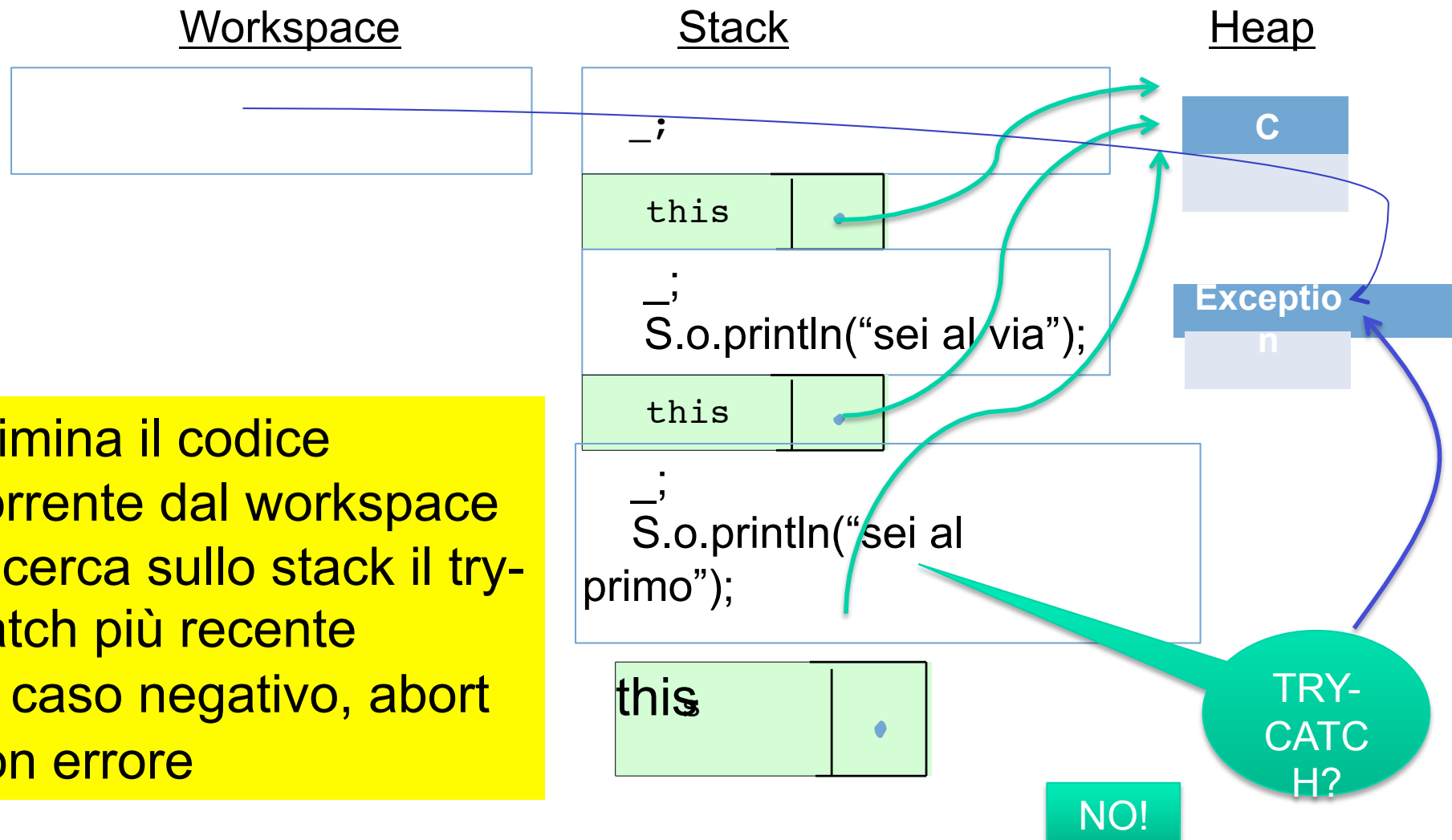


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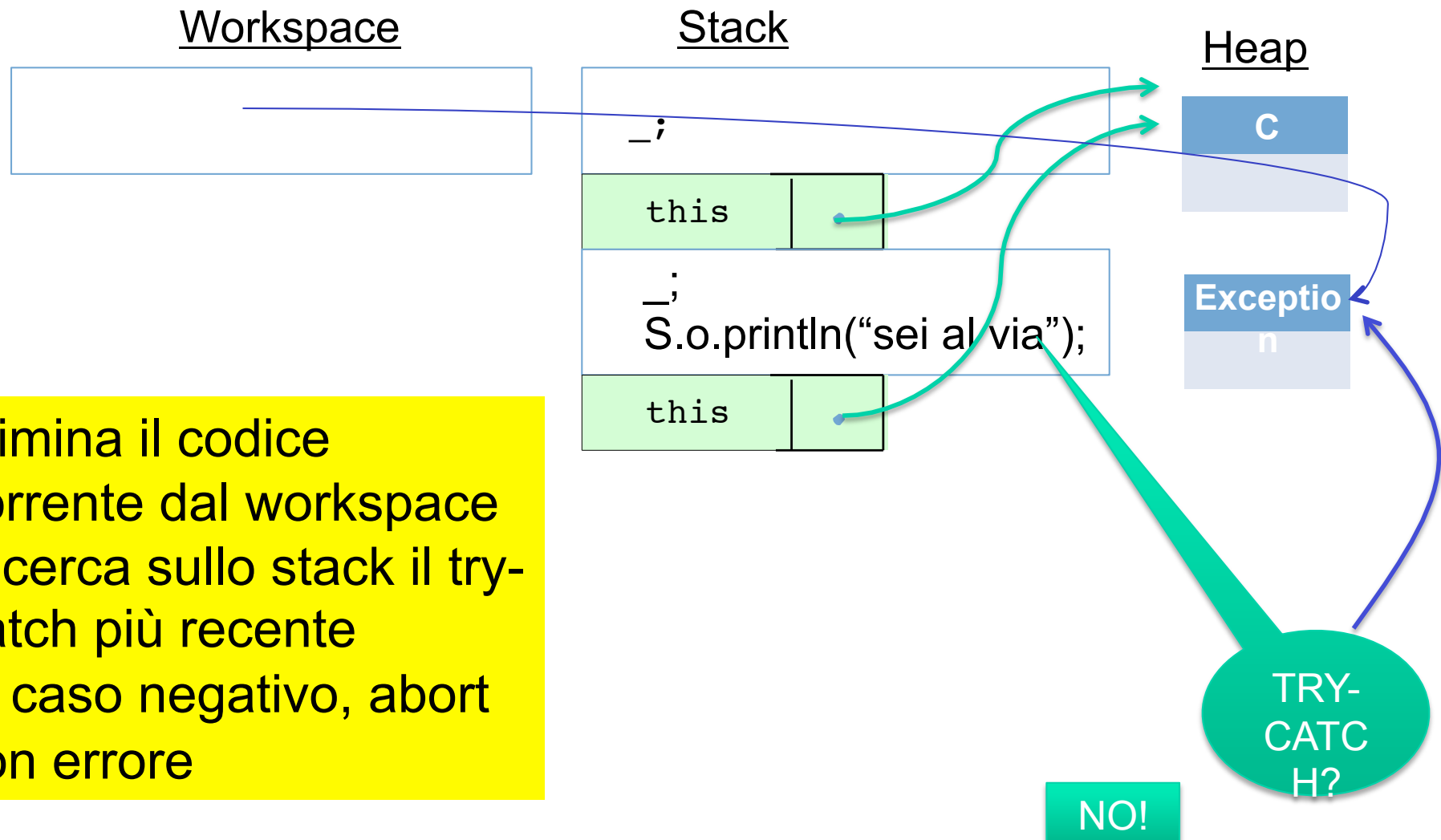
Elimina il codice
corrente dal workspace
Ricerca sullo stack il try-
catch più recente
In caso negativo, abort
con errore

Abstract Stack Machine

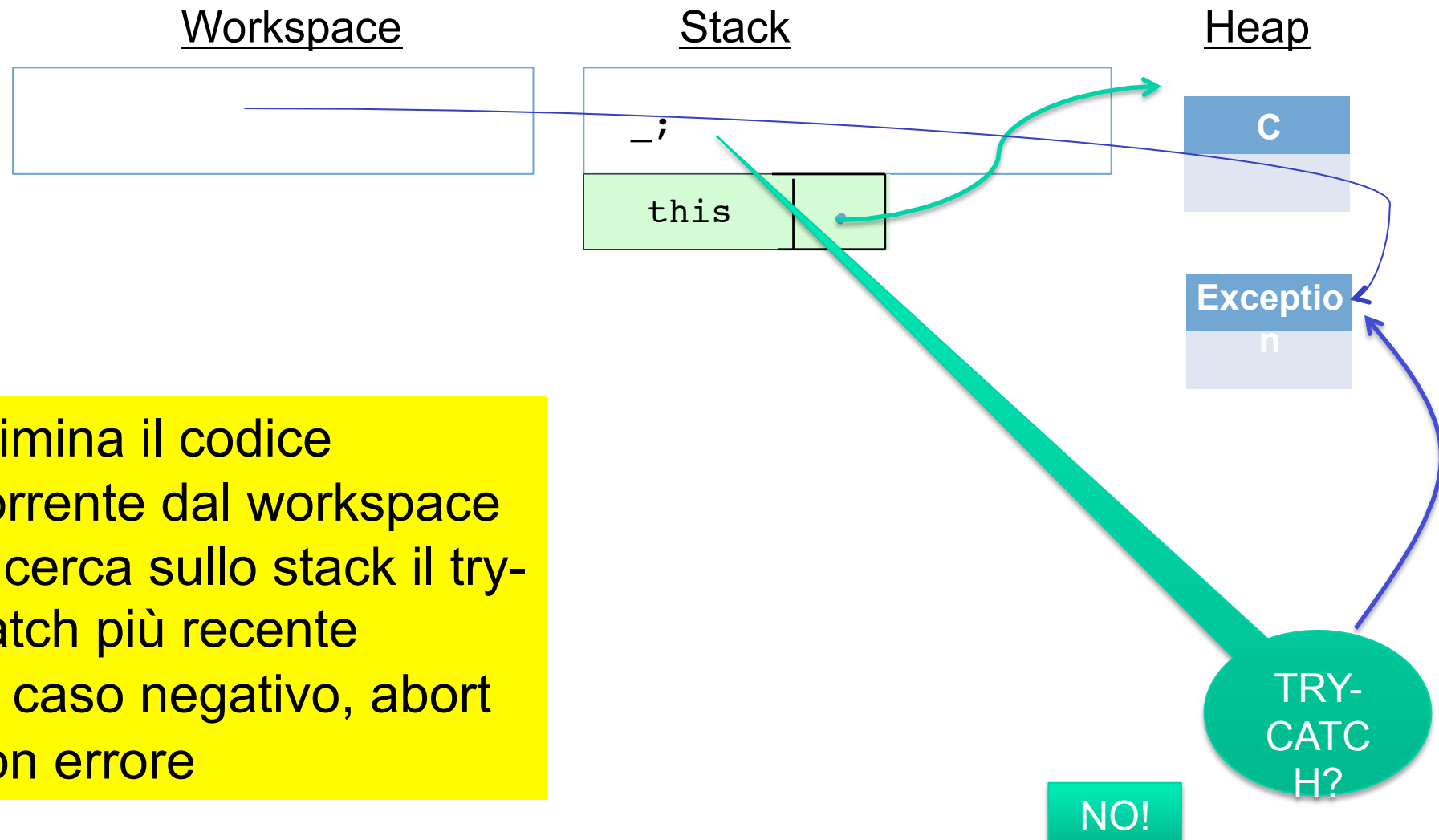


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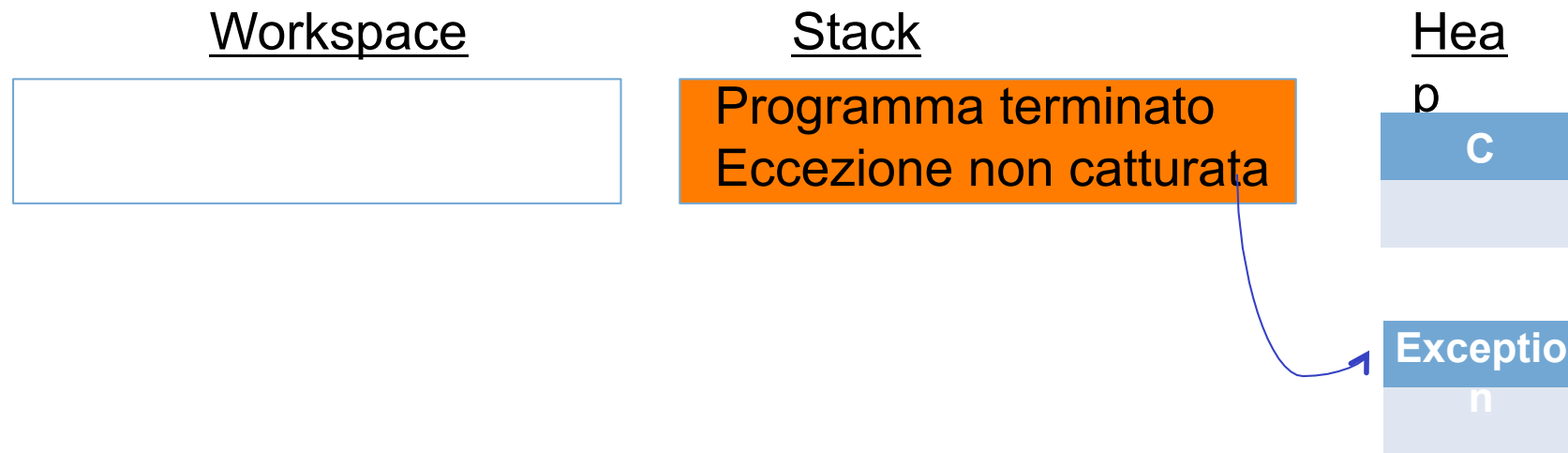


Abstract Stack Machine



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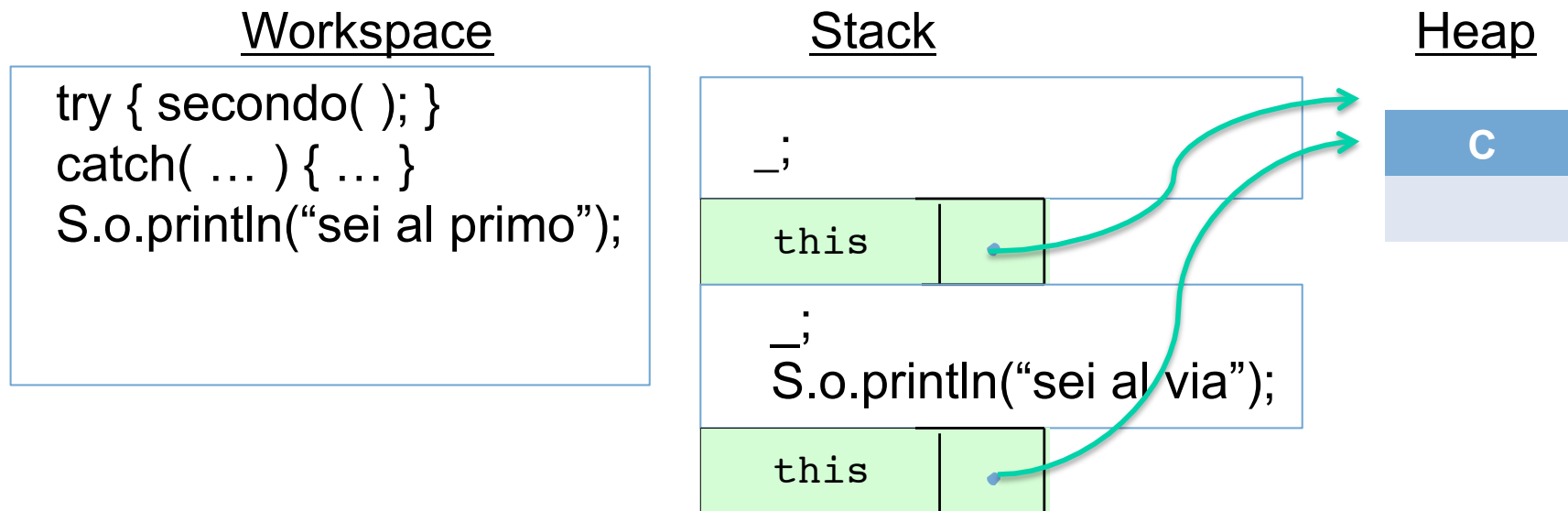
Abstract Stack Machine



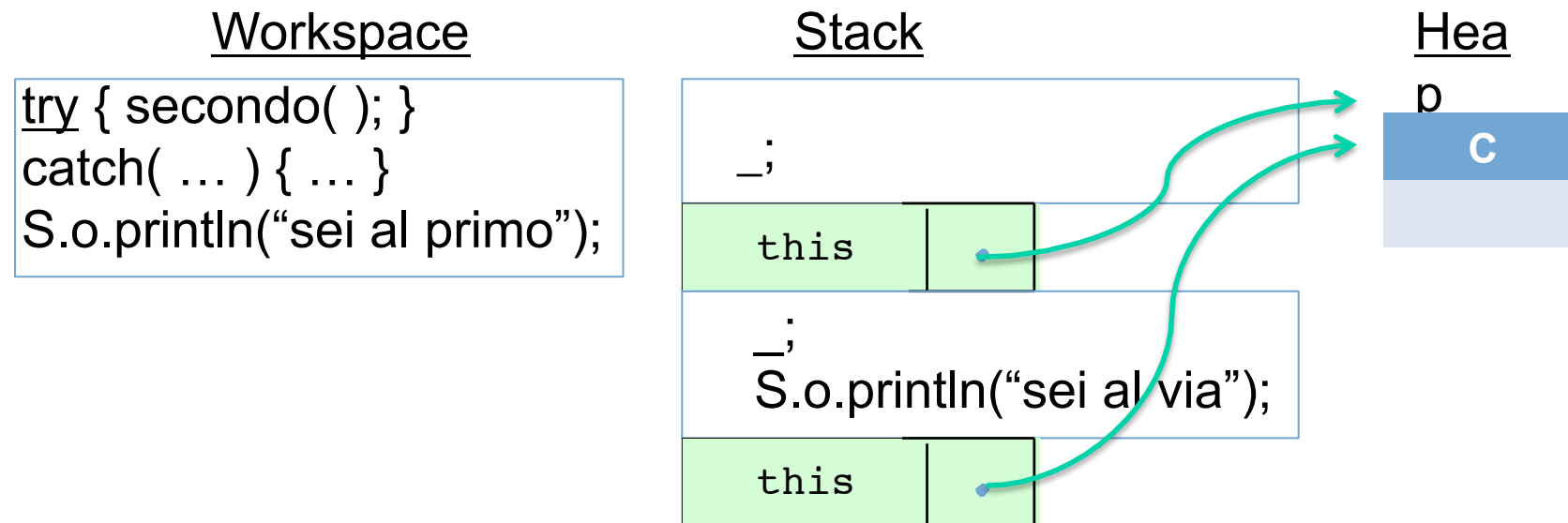
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    public void via( ) {  
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    }  
  
    public void primo( ) {  
        try { secondo( ); }  
        catch (Exception e) {  
            System.out.println("catturata " + e)  
        }  
        System.out.println("sei al primo");  
    }  
  
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Cosa succede con (new C()).via();?

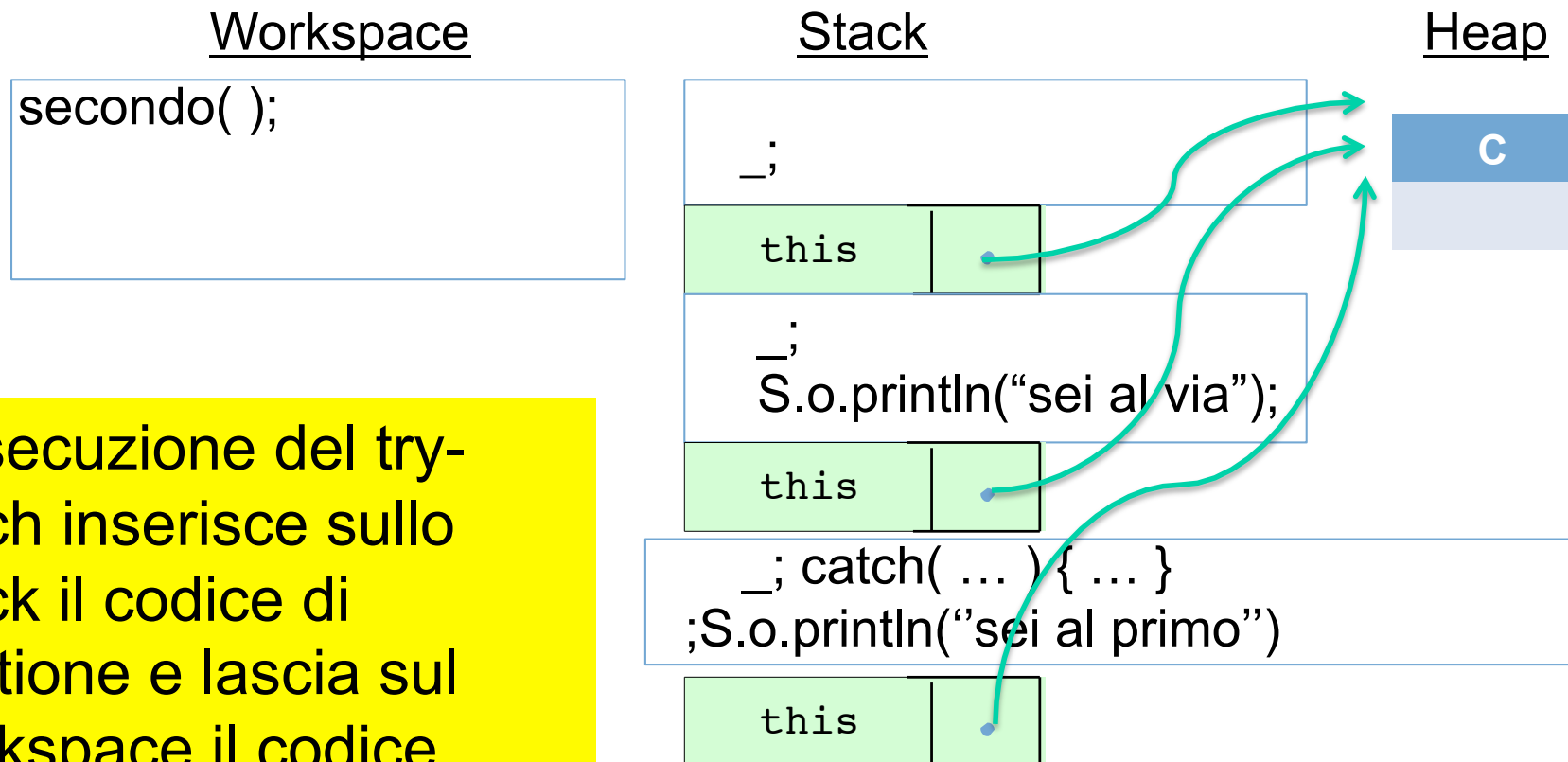
Abstract Stack Machine



Abstract Stack Machine

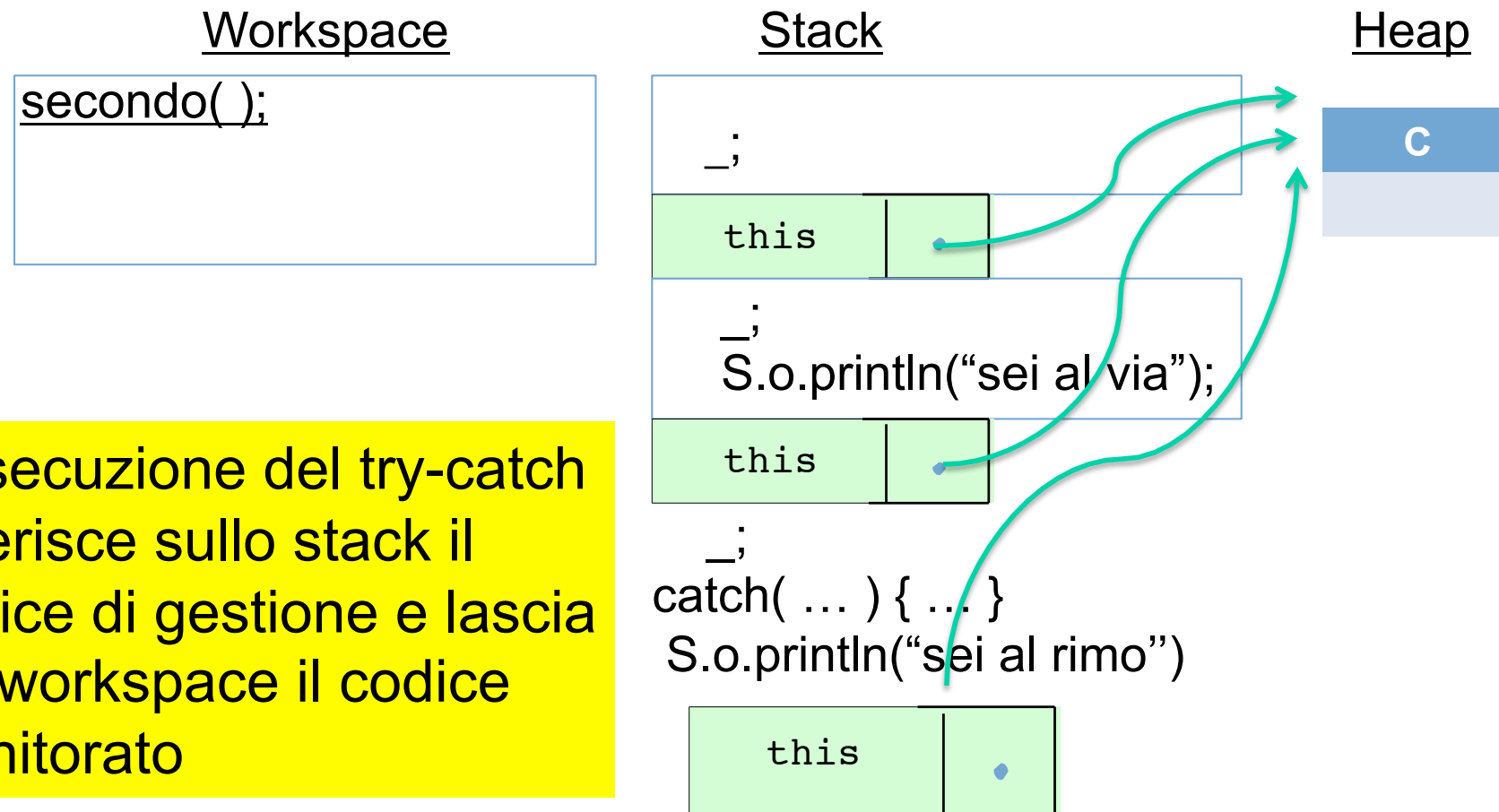


Abstract Stack Machine



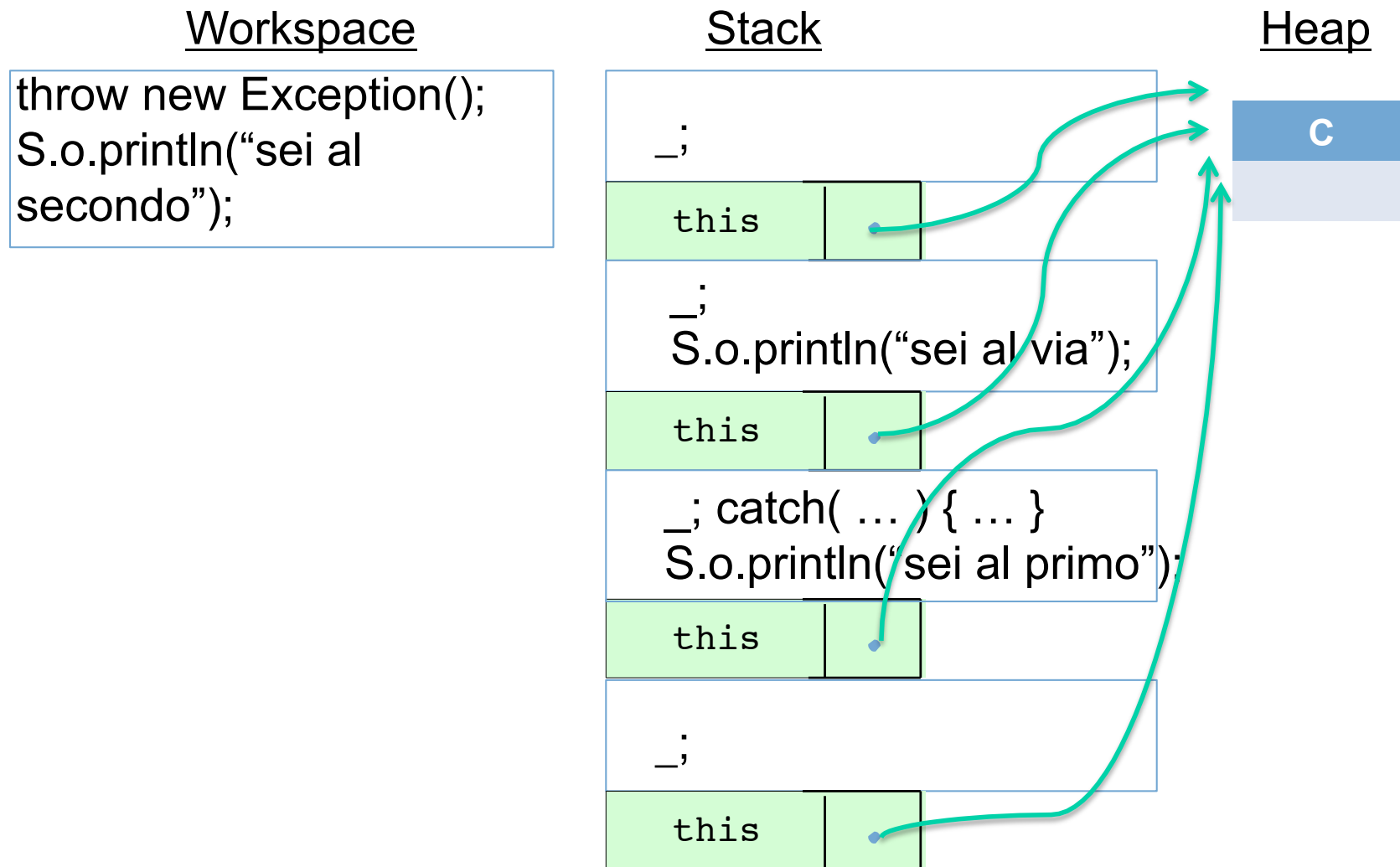
L'esecuzione del try-catch inserisce sullo stack il codice di gestione e lascia sul workspace il codice monitorato

Abstract Stack Machine

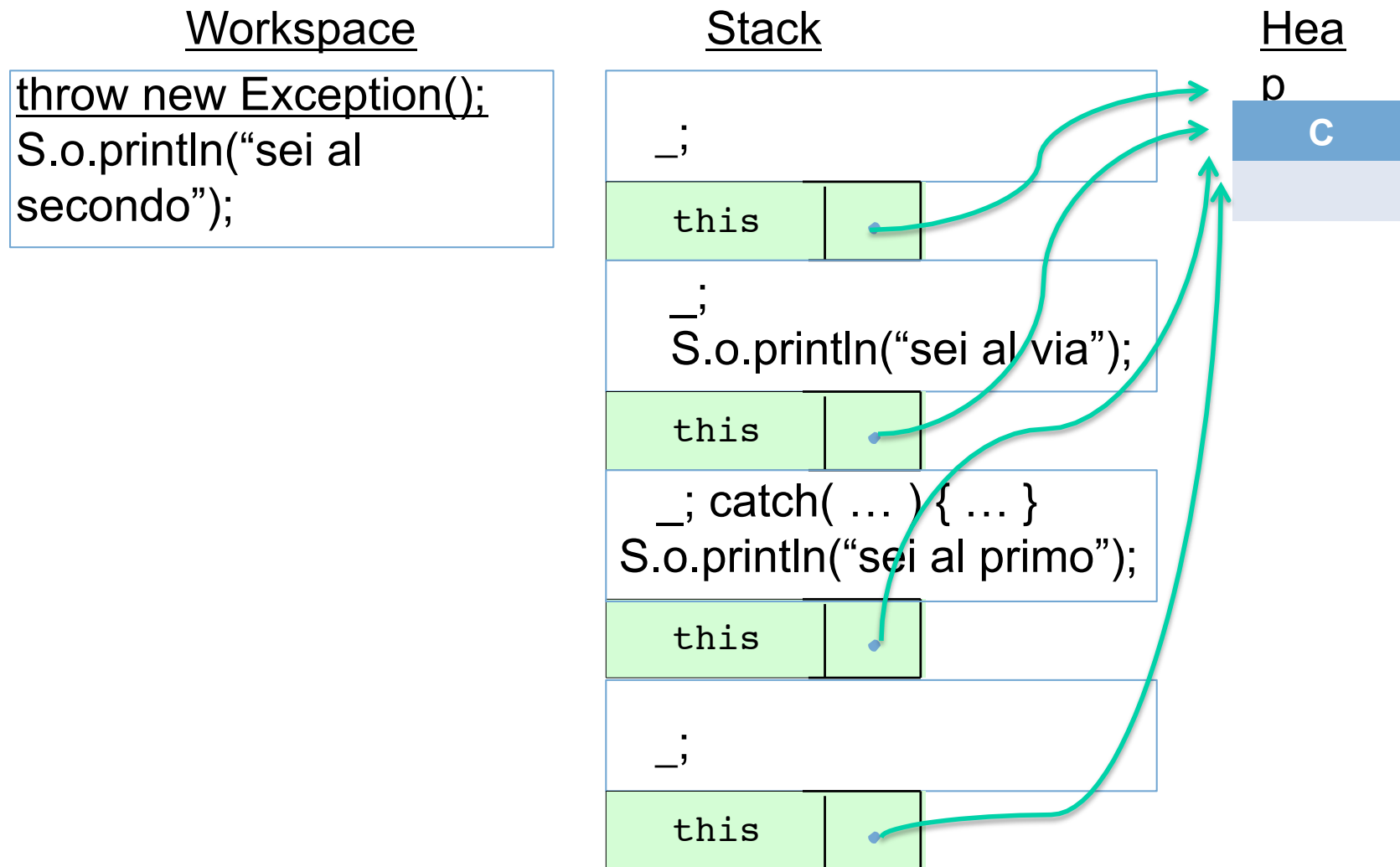


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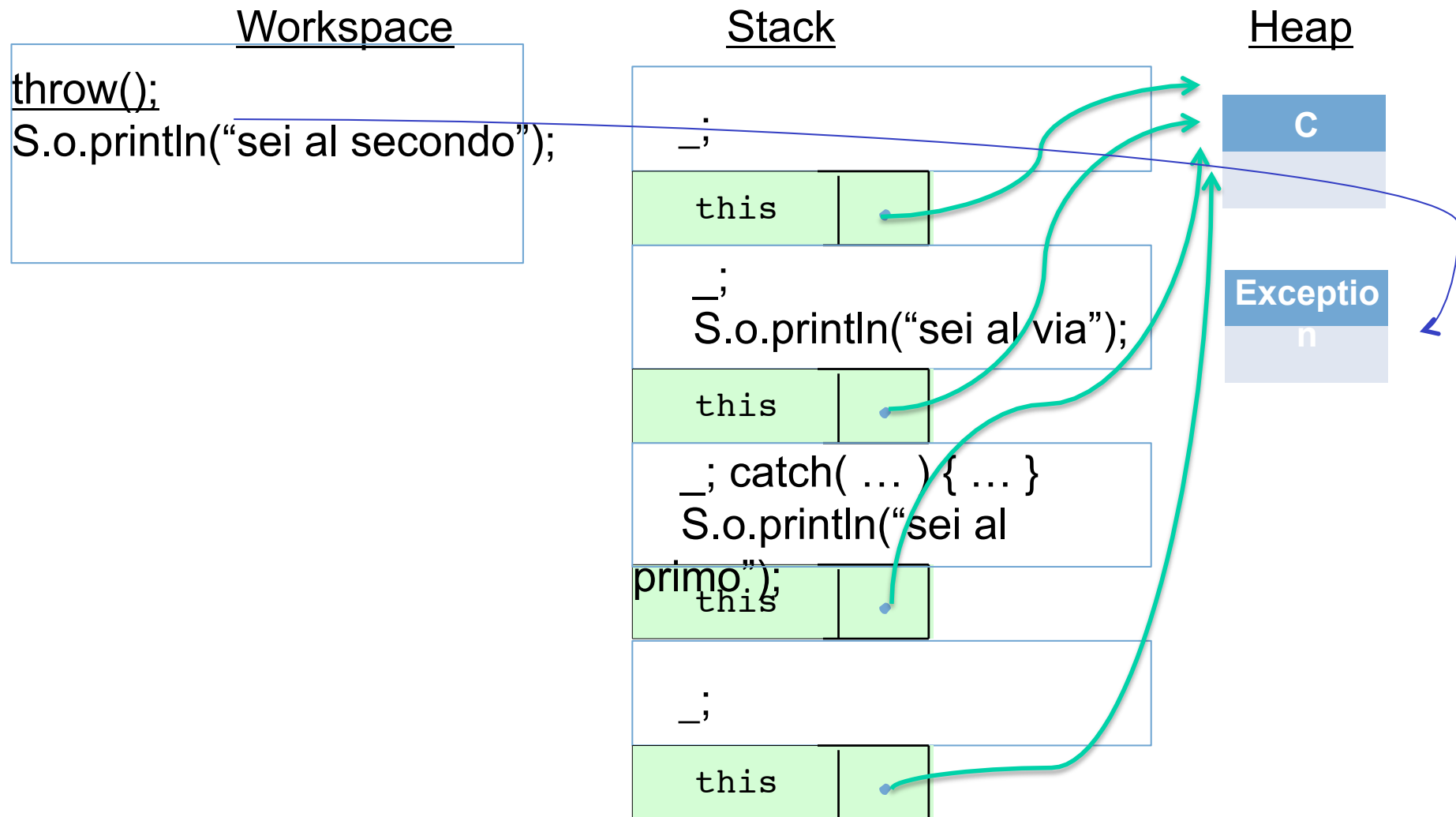
Abstract Stack Machine



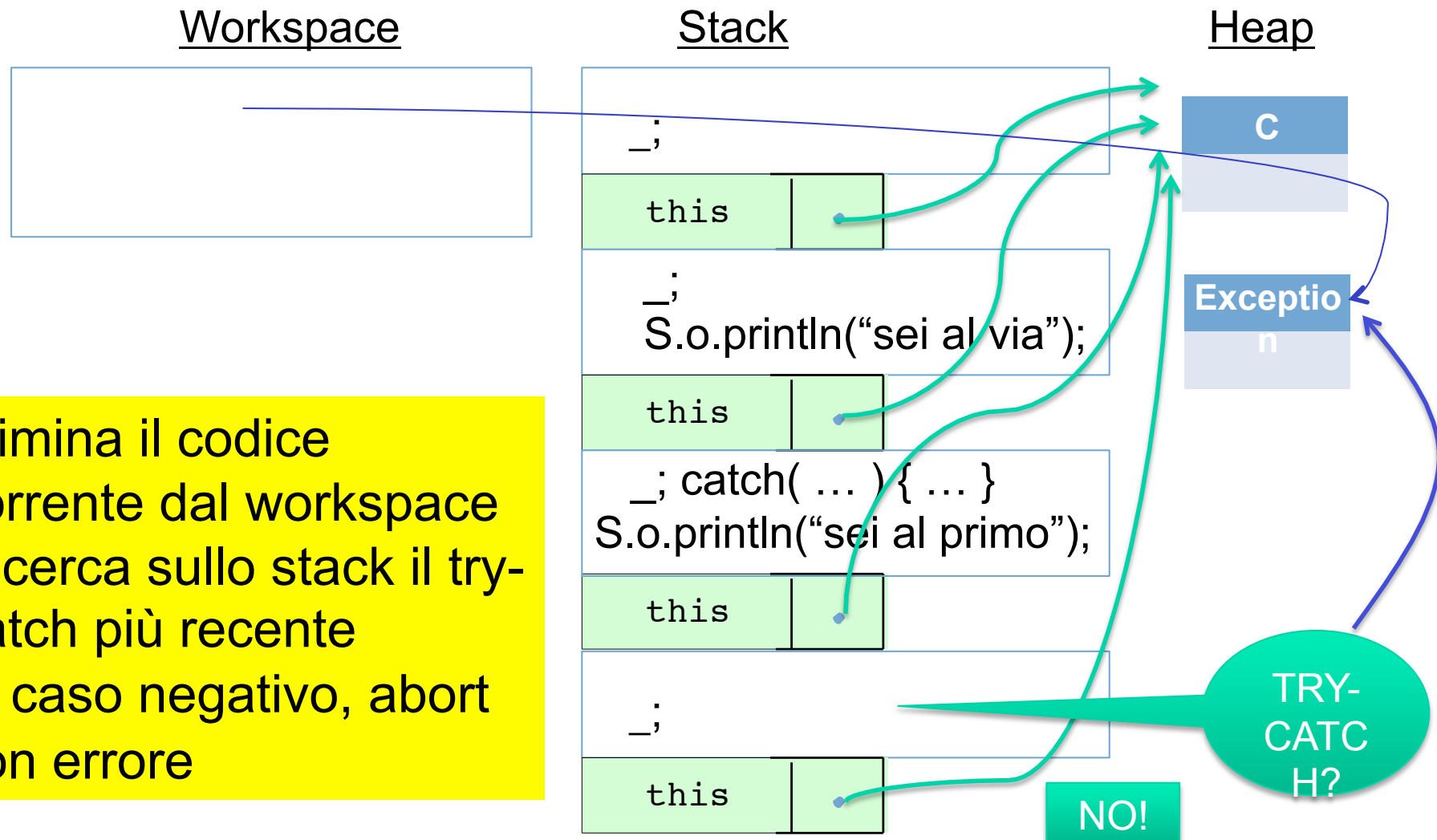
Abstract Stack Machine



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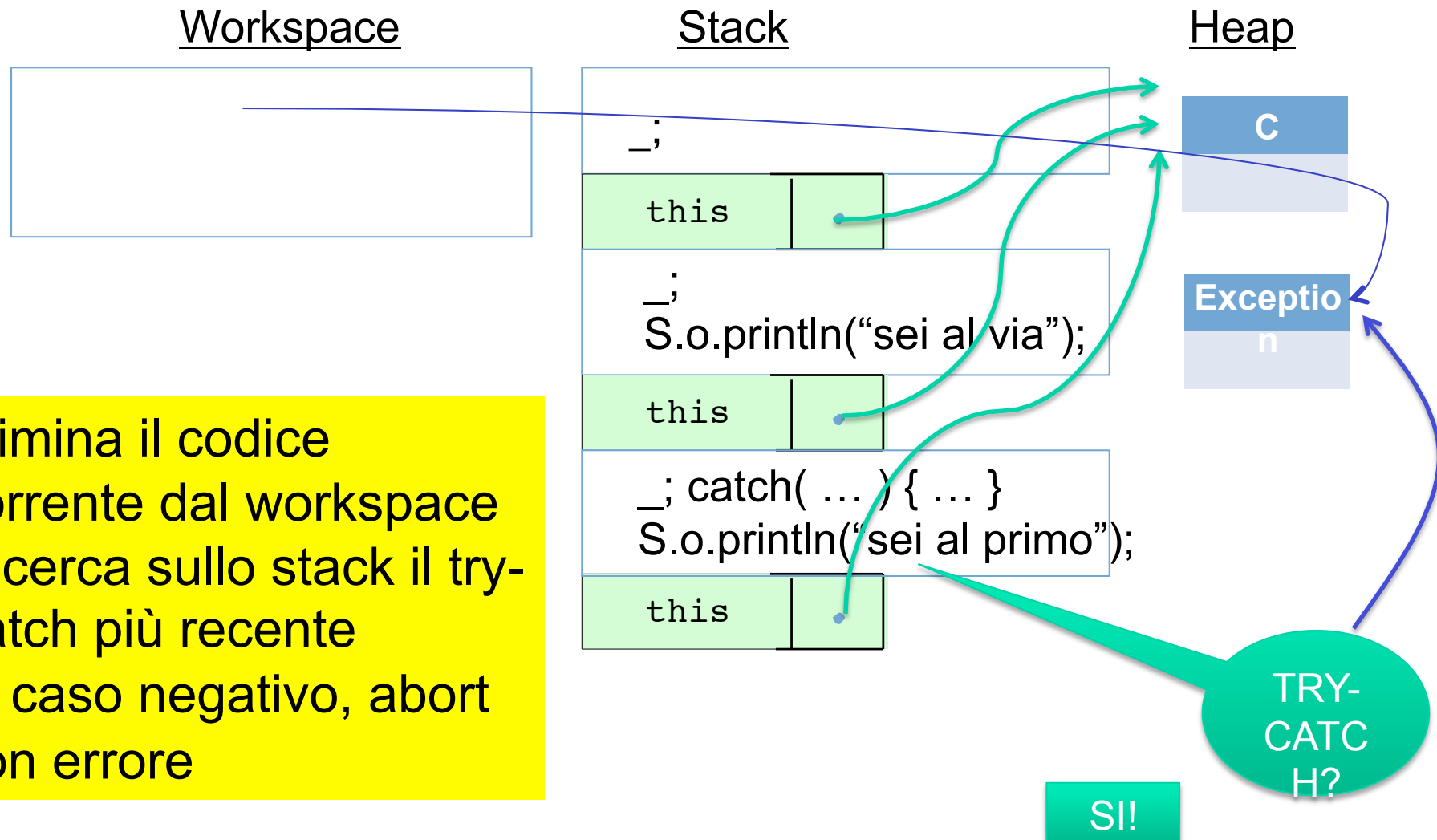


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