MONEY?? LIBRARIES??
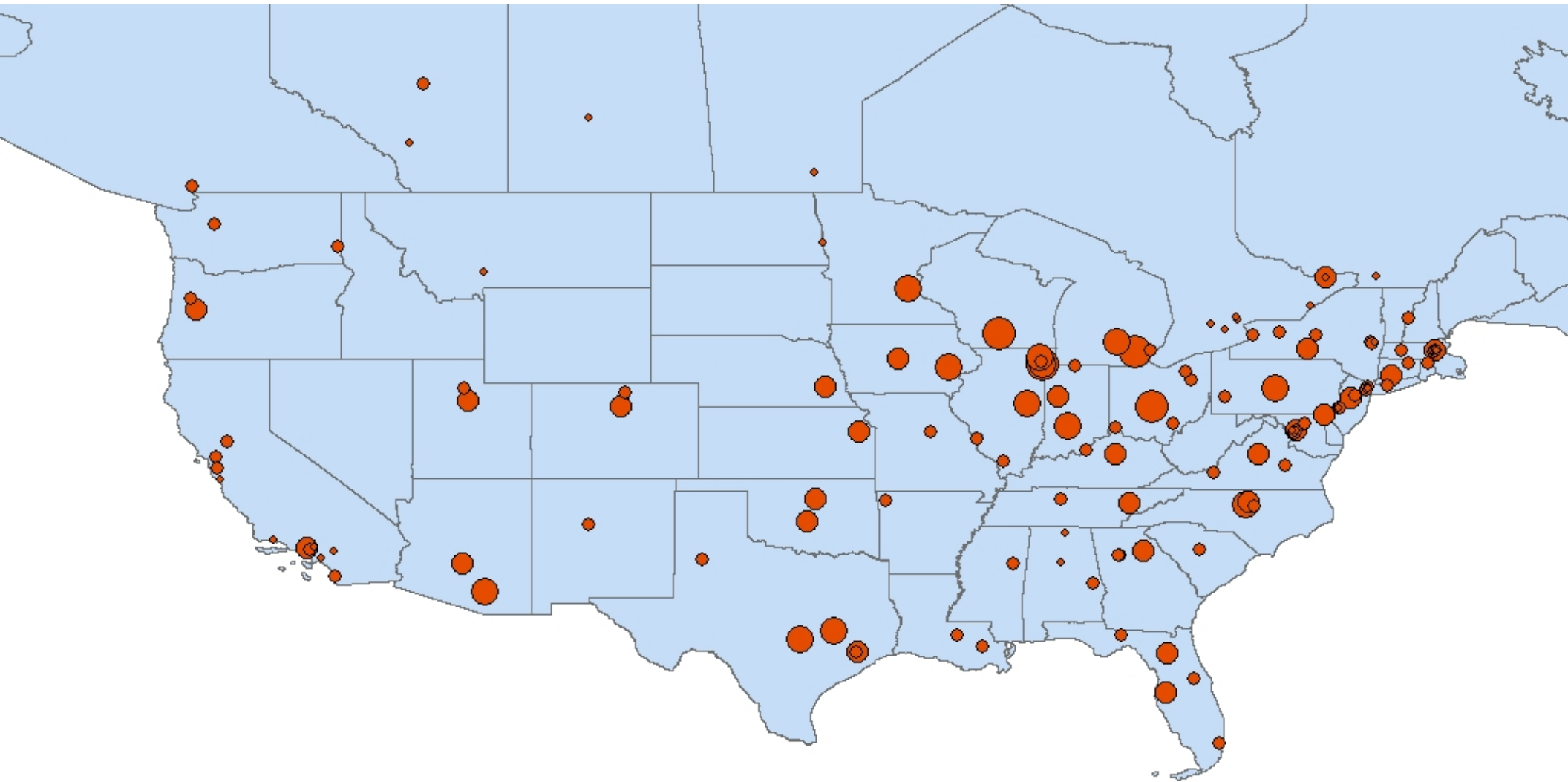
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LIBRARIES ∝ NATIONAL INSTITUTES OF HEALTH FUNDING

```sql
use bdc2014

create table ill_institutions
(
Institution varchar(255),
City varchar(125),
State varchar(50),
Zipcode varchar(9),
RU_VH varchar(1),
ARL varchar(1),
ACAD_RES varchar(1),
Public_100K varchar(1),
Public_CA varchar(1),
latitude float,
longitude float
);

bulk insert ill_institutions
from 'C:\Users\Felix Kabo\Desktop\BDC Knowledge Institutions.txt'
with (firstrow=2);
--406 rows
```

```sql
create table nihgrants2013
(
ORGANIZATION varchar(255),
AWARDS int,
FUNDING int,
CITY varchar(125),
STATE varchar(2)
);

bulk insert nihgrants2013
from 'C:\Users\Felix Kabo\Desktop\NIH Funding FY2013.txt'
with (firstrow=2);
--2292 rows
```

```sql
select sum(FUNDING) as moneyflows,
upper(CITY) as city, upper(STATE) as state
into moneysum
from nihgrants2013
group by CITY, STATE
order by moneyflows
--813 rows

select * into knowledge_houses
from ill_institutions
left join states_abbreviations
on ill_institutions.State =
states_abbreviations.ST
--406 rows
```

```sql
select COUNT(Institution) as knowledge_counts,
upper(City) as cities, ABBR as states
from knowledge_houses
group by City, ABBR
order by knowledge_counts
--318 rows

select COUNT(Institution) as knowledge_counts,
upper(City) as cities, ABBR as states
from knowledge_houses
where ABBR!='NULL'
group by City, ABBR
order by knowledge_counts
--279 rows
```

```sql
select COUNT(Institution) as knowledge_counts, upper(City) as cities,
ABBR as states
into total_knowledge
from knowledge_houses
where ABBR!='NULL'
group by City, ABBR
order by knowledge_counts
--279 rows

select * into money_knowledge
from moneysum
left join total_knowledge
on moneysum.city = total_knowledge.cities
and moneysum.state = total_knowledge.states
--813 rows
```

```sql
select * from money_knowledge
where states!='NULL'
order by moneyflows
--194 rows

select * from money_knowledge
where knowledge_counts>0
order by moneyflows
--194 rows
```

```sql
--Finally, take easy route and calculate correlations in Stata...or do it in SQL
alter table money_knowledge
alter column moneyflows bigint


declare @mean1 decimal(20,6)
declare @mean2 decimal(20,6)
select @mean1=AVG(moneyflows*1.0)
,@mean2=AVG(knowledge_counts*1.0)
from money_knowledge
where knowledge_counts>0;

select (SUM((moneyflows*1.0-@mean1)*(knowledge_counts*1.0-@mean2))/
COUNT(*))
/((STDEVP(moneyflows*1.0)*STDEVP(knowledge_counts*1.0))) as correlation
from money_knowledge
where knowledge_counts>0;
--0.554758521032079  Is it elegant? Maybe not...but you get the picture
```

MORE *LIBRARIES* = MORE MONEY!!

♫