

Closing the Southern Land Border of the United States - 2019

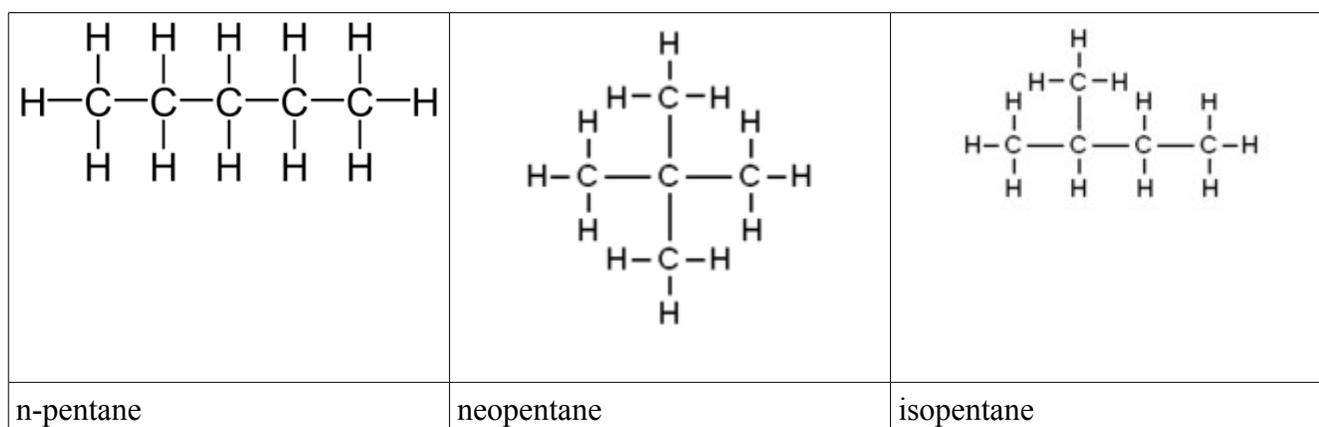
## "Time spent in reconnaissance is never wasted" - Napoleon

### LINGUISTICS

When using the English language to communicate a common practice is to use words often thought of as verbs as nouns. For example, adding 'ing' to a verb so that the verb 'talk' becomes 'talking' can result in a word form known as a gerund - somewhat ironically, from Latin as the gerundive form of *gerere* = "to bear, carry". In the opposite but convergent process one can "verb" or "verbify" a noun as in "He tabled the motion". For some words such as "permit" and "object" a skilled speaker will change the pronunciation by shifting the stress to allow a listener to distinguish between verbs and nouns. No such simplification exists for 'border' (noun), border (verb) and 'boarder' (another noun).

### CHEMISTRY

On the cover page the upper image is a schematic of pentane, a close relative to butane and octane, with green being carbon atoms and gray being hydrogen atoms. As it happens, pentane is not as simple as it appears – there are three common isomers:



On the cover page the lower image is a schematic of a polycatenane based on six pentagons. In the simpler molecules like pentane the repeating backbone element of the polymer is a single carbon atom. In a polycatenane the repeating element is the six interlocked rings so one can form complex structures. Three-dimensional polycatenane grids are a good model for the economic interactions that occur at the southern land border of the United States in the early 21s century.

## TRADE

Some snapshots of countries currently deeply engaged in transporting goods across the southern land border of the United States ( all populations are July 2018 estimates while imports and exports are 2017 estimates; the source is the World Factbook from the United States Central Intelligence Agency)

### **Belize:**

**population:** 385,854

**exports:** bananas, cacao, citrus, sugar and molasses; fish, cultured shrimp; lumber

**imports:** machinery and transport equipment, manufactured goods; fuels, chemicals, pharmaceuticals; food, beverages, tobacco

### **El Salvador:**

**population:** 6,187,271

**exports:** offshore assembly exports, coffee, sugar, textiles and apparel, ethanol, chemicals, iron and steel manufactures

**imports:** raw materials, consumer goods, capital goods, fuels, foodstuffs, petroleum

### **Guatemala:**

**population:** 16,581,273

**exports:** sugar, coffee, petroleum, apparel, bananas, fruits and vegetables, cardamom, manufacturing products, precious stones and metals

**imports:** fuels, machinery and transport equipment, construction materials, grain, fertilizers, mineral products, chemical products, plastic materials and products

### **Honduras:**

**population:** 9,182,766

**exports:** coffee, apparel, shrimp, automobile wire harnesses, cigars, bananas, gold, palm oil, fruit, lobsters, lumber

**imports:** communications equipment, machinery and transport, industrial raw materials, chemical products, fuels, foodstuffs

## Mexico:

**population:** 125,959,205

**exports:** manufactured goods, electronics, vehicles and auto parts, oil and oil products, silver, plastics, fruits, vegetables, coffee, cotton

**imports:** metalworking machines, steel mill products, agricultural machinery, electrical equipment, automobile parts for assembly and repair, aircraft, aircraft parts, plastics, natural gas and oil products

## United States:

**population:** 329,256,465

**exports:** agricultural products, industrial supplies, electronics, aircraft, automobiles, medicines

**imports:** agricultural products, industrial supplies, crude oil, computers, telecommunications equipment, motor vehicle and their parts, office machines, electrical power machinery, consumer goods, clothing, medicines, furniture and toys

## MONEY

The imports and exports are between a country and the United states. Trade is the sum of exports and imports

Country	Exports (millions)	Imports (millions)	Trade (millions)
Belize	100	301	401
El Salvador	2,130	3,468	5,598
Guatemala	3,736	6,810	10,546
Honduras	2,993	4,562	7,555
Mexico	327,840	195,251	523,091
Total	336,799	210,392	547,191
percent of US	21.69%	8.91%	13.98%

# ECONOMICS

Some observations:

/1/ The United States has a very negative balance of trade: it imports far more than it exports: 808,000,000,000 (808 BILLION) dollars last year alone.

/2/ The United States is highly leveraged: our external debt at the end of 2017 was 16.285 TRILLION dollars. This exceeds the sum of the external debts of Great Britain, France and Germany.

/3/ The United States lacks the cash flow and the reserves of foreign currency to engage in one trade war, let alone two with major partners: Mexico is the second largest importer and exporter to the United States; China is the largest exporter and Canada is the largest importer.

/4/ If the southern land border of the United were closed it is very unlikely that American railroads, seaports and airports could process significantly more freight.

/5/ It is impossible to believe that China would not aggressively seek to replace American goods being imported into Mexico. This loss of business would be permanent.

/6/ Mexico is a significant producer of silver, bismuth, wollastonite, fluorspar, cadmium and zinc as well as steel and petroleum. The United States is heavily invested in production and consumption of Mexican gold, copper, coke, coal, lead, molybdenum and iron. Purchasing these commodities is a triple win for China:

/a/ China receives the raw materials /b/ China can fill the ships that now cross the Pacific westward with empty holds /c/ the United States must pay premium prices to purchase and transport these materials from elsewhere

/7/ Then there are the foreign and domestic loans American banks have made to businesses that depend on either tourism or trade

/8/ For a one month halt of all land-based traffic along the United Southern border we find no (zero) scenarios where the American economy or American society survives in recognizable form.

## CONCLUSION

Napoleon's point was that an able leader must very carefully choose the time and place of battle – regardless of whether the weapons are tariffs or torpedoes.

This is echoed in **The Art of War** by the illustrious Chinese theorist Sun Tzu:

“The art of war is of vital importance to the State. It is a matter of life and death, a road either to safety or to ruin. Hence it is a subject of inquiry which can on no account be neglected.”

and

“who wishes to fight must first count the cost”

as well as

“There is no instance of a nation benefiting from prolonged warfare.”

Any rational analysis, regardless of what school of economics one prefers, will clearly show that any advantage the United States MIGHT accrue versus Mexico and the neighboring countries would be swamped by the profound benefits realized by China.

“I thought I saw down in the street  
the spirit of the century  
telling us that we're **ALL** standing on the border “

from the song “On the Border” on the 1976 album **The Year of the Cat**

by Alistair Ian Stewart (usually known as Al) – British musician, songwriter and folksinger; 1945 to present

Peter F. Zoll

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