The
Speak Logic Project

We Promote Better Communication

Fundamental of Communication Chapter 11 And 12

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Preface

The reason of a given system theory is to enable the functionality of the underlined system. It is very important for us to pay attention to our parent's feedback related the underlined application. It is very important for us to pay attention when we receive a principle from our parent about an application at the time that principle was given. Within our parent set of principles, all principles are important. The process of understanding and learning our parent principles is not possible if we disregard some of those principles. Given that there are similarities within the principles themselves, when we disregard some of them, we also disregard the logic that enables us to understand those principles. Given that we function related to those principles, when we disregard the logic that enables us to understand those principles, we also disregard life and ourselves. In other words, when we disregard some of those principles, we simply disregard the logic that enables to understand life.

As a theory dependable system, we apply theory independently to enable us to derive and execute functions of life. Given that we function associatively, it makes sense for us to provide information about those functions to others so they can be useful to them. The process of providing information about functions that we derive in life, names as marketing or proper, theory of marketing. In chapter 11, we introduce to the theory of marketing. Chapter 11 enables us to learn the process of using our parent principles to provide information about goods and services that we exchange.

Given that we apply theory independently to derive and execute functions of life, there is a need for us to exchange what we need among ourselves. After receiving information about specific function of life, there maybe a need for that function. We use the terms exchange system theory, to denote the set of our parent principles that we used to exchange functions of life. In other words after receiving information about specific goods or services, there may be a need for them; we use a set of our parent principles that facilitate us to exchange goods and services among ourselves. We name that set of principles, the exchange system theory. We introduce to that set of principles in chapter 12.

The learning of a theory is not possible without the application of that theory. For this reason, we include exercises to facilitate the understanding of our parent principles. If this book is going to be used in a classroom, it is recommended not to grad the exercises. Since life is a practical system, it is always better to let the application of those exercises being the grade of the students rather giving letter or number. The way to look at it, when an exercise is understood practically by a student, the practical understanding of that exercise is being viewed as the grade for that student. It is very important for us to understand that. By doing it and taking it this way, we can make progress in life.

Some Reading Suggestions
It is preferable and it is recommended to start from the beginning while reading this book. If an exercise is referred to, we can go and look at that exercise or simply flag it. While we choose the exercises we want to do, it is better to work them out from top to bottom rather from the bottom to the top. In other words, it is better for us to use the knowledge we get from an exercise on the top to do one at the bottom, rather using the knowledge from one at the bottom to do one on the top. Nevertheless, as we gain more knowledge from learning the principles, we may find out that some exercises on the top should have been approached differently. This is normal; we can still go back and work them out the way we want. Since the exercises are given in an incremental basis in term of our understanding, it is recommended not to scan the book. Rather than scanning the book, it is always better to let our understanding take us to the next level.

Some Reading Recommendation
The following exercises can be disregarded. You don't have to work them out or worry about them. You probably don't need to work them out or worry about them in your life time. Those exercises are all the short exercises that ask you to show your understanding of one entity related to another entity in chapter 11 and chapter 12 and appendix C. While you are learning the principle or in the process of learning it, it is highly recommended for you to skip those exercises. Those exercises have no limit in term of understanding the principle and they require a higher level of understanding of the principle. As your understanding of the subject increases, the understanding of those exercises and their workouts also increases accordingly. For now, there is no need to worry about them or work them out; you can simply skip them. While you may skip them, that always depends on you as well.

How to Handle It
How to I handle it? How do I view it? How to I handle the Book? How do I view the Book?

By understanding exercise number 416, we know that our utilization theory is not physically identified. In exercise number 532 and 565, we have learned that, since our utilization theory is not physically represented or represented by a physical entity, we have to handle it with care and we have to handle it differently. The way to look at it, while the book may help us in the learning of the principle, but it is not good for us to think that the principle itself is a book. By understanding that, it is not good for us to handle the principle as a book. Thus while using this book to help us learn the principle; it is not good for us to think that this book itself is the principle. Since the principle itself is not a book, we should not think it is a book or handle it as a book. Once we approach it as a book, we will not be able to learn it properly. To enable us to learn the principle properly, we should approach it as a principle, but not as a book.

Problem Statement

One of the important concepts we have learned about our parent principles is the similarity within the principles themselves. By understanding that, we can quickly realize what is good, what is bad, and when we are wrong. It is very important to understand the fundamental of our parent principles.

Previously we have learned the set of principles that enable us to correct error in our communication, the set of principles that enables us to use our instruments properly, the set of principles that deals with information etc. Now, by understanding those principles, we can quickly realize that there exits other principles as well that are needed. All those principles are considered to be very important for the functionality of the physical system. It is very important for us not to disregard a set of principle within our parent principles or any principle that include in that set. Once we do that, we simply disregard the logic that enables us to understand the principles.

One important question that is very good for us to ask about our utilization theory is what is the importance of a given set of principles? It is very easy to answer this question by saying that the reason of a given set of principles is to enable the functionality of the underlined system. For us, we can say that our parent principles are given to us to enable our functionality. That is correct; however we can still ask another question, why? Why those principles are so important? And why those principles are given to us? To answer this question, it is always good to refer to exercise number 147. Please, pay attention to that exercise and it is very, very important to understand.

Chapter 11

Understanding the Theory Of Marketing

Introduction

Life is a complex system as we have learned before. It is very important for us to understand the system we are living in. Given that life depends on us, it is very important for us to understand ourselves as well. Without understanding ourselves, there is no way we can understand life. In order to understand life, which is the functional system, and ourselves which is the physical system, we have to learn our parent principles to tell us how the system works. By using our parent's principles to enable us to understand the system, we can execute functions in the system to enable both the physical system and the functional system to work properly.

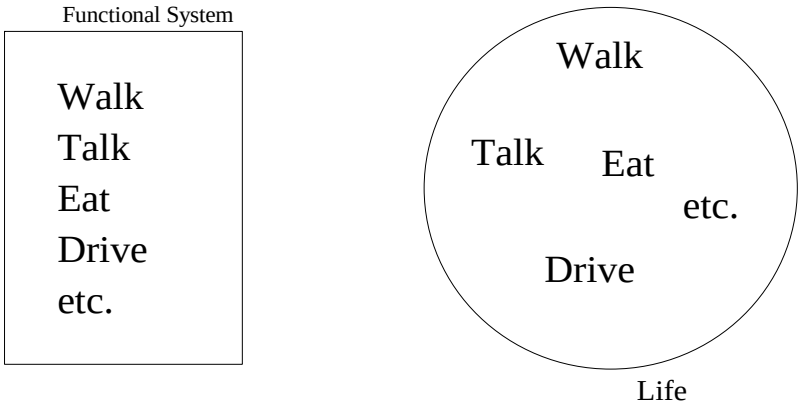
The functional system is made up of both existing and adding functions. The purpose of adding functions to life is to extend the overall system, which we call the functional system. The way to look at it, when we add a function to life, we simply extend life. The terms extend life means that we add extra functions to the functions that are already existed in the system. Given that we all live in different—separate—locations and different countries, and we also apply theories independently—or in group—to derive methods to help us in what we do, it makes sense for us to make other people know about methods that we develop and how they can be useful in life. The process of marketing is to provide information of functions that we add to life. Those functions can be methods executed by instruments, which we also call functions, they can also be services provided by us.

In this chapter, we are going to look at the aspect of marketing. What we mean by the aspect of marketing? We simply mean that we are going to look at the set of principles

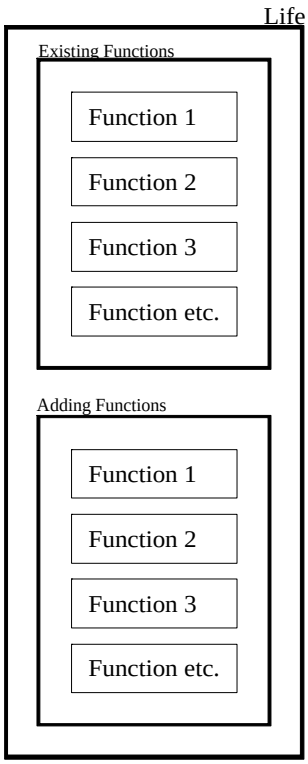
from our parents that are used to provide us information about functions added to life. This set of principles is known as theory of marketing.

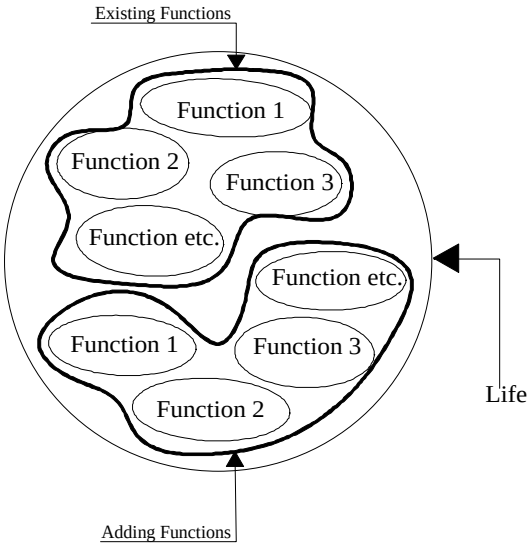
Understanding the Functional System

The functional system, life is made of two set of functions. These two set of functions are the existing functions and the adding functions. We have already seen the visual aspect of the functions that makeup life. We are very familiar with the diagram below, where we show couple of functions that makeup life. From this diagram, we present couple of functions that makeup life without grouping or separating them.



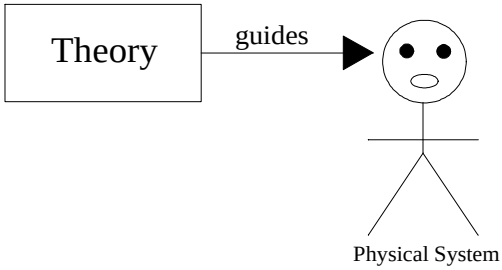
From what we have learned about life and from the above diagram, we can separate the two set of functions that make up life to strengthen our understanding. Let's look at again the grouping of functions that makeup life in the following diagram. The diagram bellow shows that life is made of two set of functions. For a better visualization, we separate both the existing and the adding functions. Since we are very familiar with the circle presentation, we present both the grouping of the functions in a circle and a rectangular form. Both of them are the same. Since life is made of many functions, we use number at the end of each function to show function's number. Since there so many of them, we simply present a few of them.



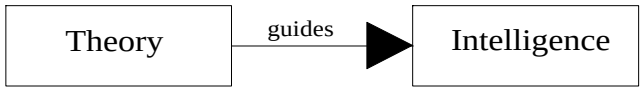


Understanding the Physical System

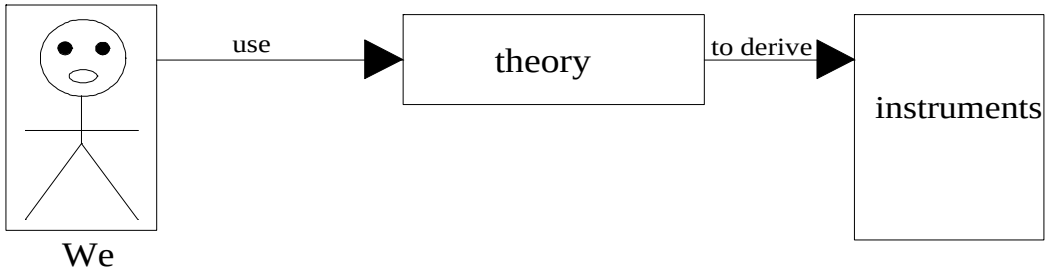
We, the physical system are defined as an intelligent-system. By being an intelligent-system, we have the ability to apply theory to derive methods that are useful in life. By being theory dependable, we can apply theory to enable the functionality of our lives. We can also apply theory to derive instruments and provide services to perform additional functions in life. From the previous section, we have learned that life is made of both existing and adding functions. The adding functions in lives are functions that we add to life. These functions are performed by instruments that we derive or by services that we provide in life. Another way to look at it, our intelligence depends on theory, gives us the ability to apply theories to derive methods that provide useful functions in life. The diagram below shows the general representation of our physical system, which is guided by theory.



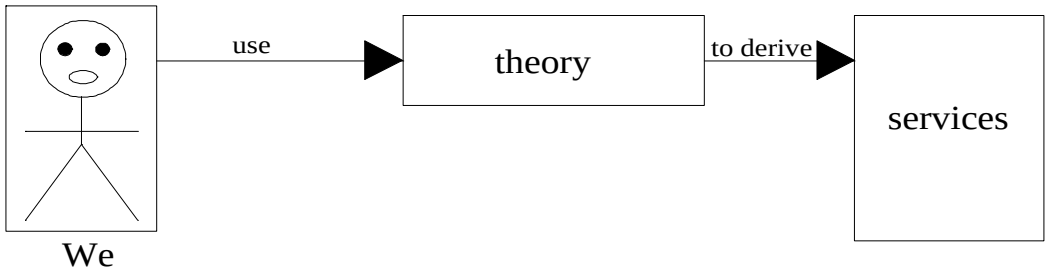
The second diagram shows below is derived from the first one, where it shows the intelligence is being guided by the theory. The way to look at it, in order for the intelligence to work properly, it does need input from theory.



The two diagrams above show the dependency of the physical system on theory. In terms of instruments derivation, it makes sense to include the instruments that are derived in the diagram. The diagram below shows exactly what we have just said. It shows that, we the physical system apply theory to derive instruments.



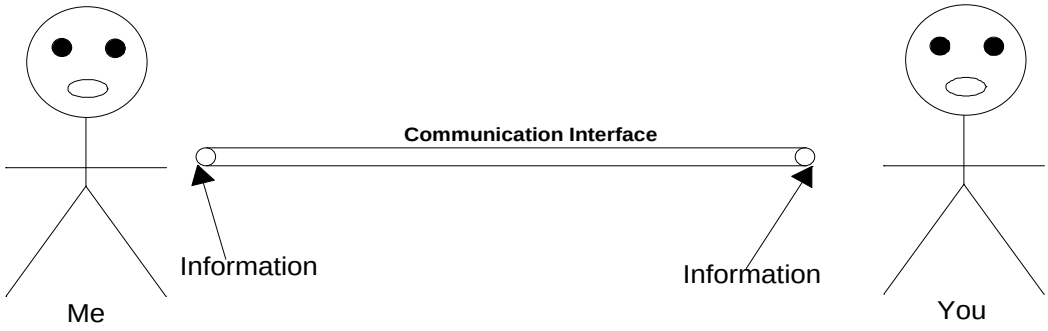
Since we have said that the functions that we add to life do not have to come from instruments, they can also be services provided by us. Given that functions are methods themselves, we can use the same diagram we have used above to show services we provide in life. In this case, we can call the services that we provide in life methods. We can also say that we use methods to provide services in life. Instruments are also considered as methods as well. The diagram below shows services that we add to life. We can also say that the services that we add to life are derived from theory that gives us ideas on how to do things. Since theory is the basis of everything that we do, it is always good to remember that everything that we do has its foundation from theory.



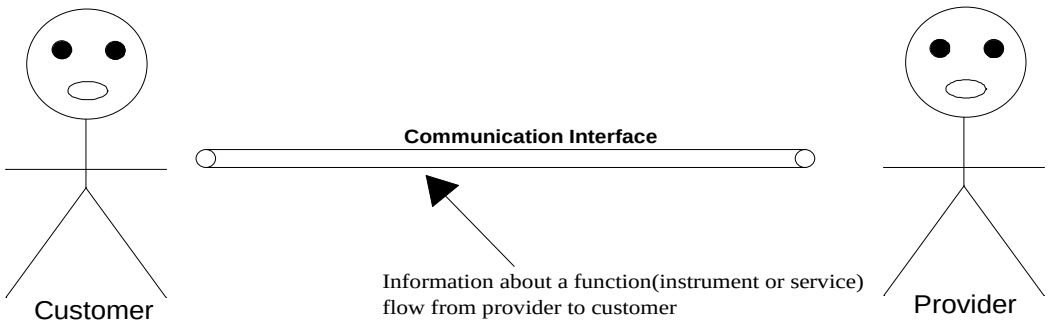
Introduction to the Theory of Marketing

From the previous section, we have learned the process of adding functions to life. We have also learned that the functions that we add to life are either performed by instruments or services that we provide. In this case, we call them methods or functions. Since we, the physical system are mobile, since we live in different locations and different countries, after derived an instrument or provided a service in life, it makes sense for us to make other people aware of the instruments or the services that we add to life, so it can be useful to them. The process of making people aware of instruments that we derive or services that we provide in life is called marketing. In other words, we can say that marketing is the process of providing information to people about instruments and services. We can also say marketing is the process of providing information to people about functions that we add to life.

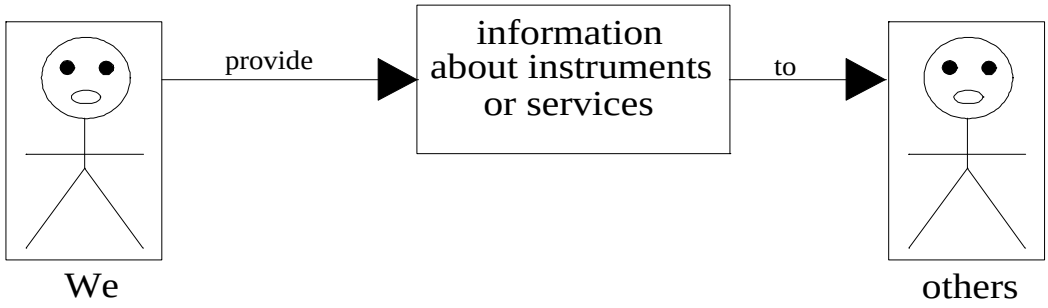
By analyzing the above paragraph and look at the process of marketing, we can see one keyword from the definition, which is information. Given that there is no, such as information without communication, it makes sense for us to look at our communication interface related to information. The diagram bellow shows our general communication interface, which carries information.



Since marketing is the process of providing information about instruments and services, it makes sense for us to show the communication link related information that flows inside that link. The diagram below shows a typical communication link related to marketing. It shows that information about instruments and services are being flown to the link from the instrument and service provider to the customer.



The diagram above shows information about instruments and services is what being flown in the communication link. We can say that this type of information is what connects us. We can also say information about instruments and services is what connect the instrument and service provider to the customer. Given that those items are separate entities from the physical system, given that the information that is being flown from the provider to the customer is separate from them, it makes sense for us to present that information in a way that is separate from the system. The diagram below shows a typical flow of the process of marketing from one to another. It shows that the information about instruments or services is being passed from one to another. We can also say information about goods and services are being passed from us to others.

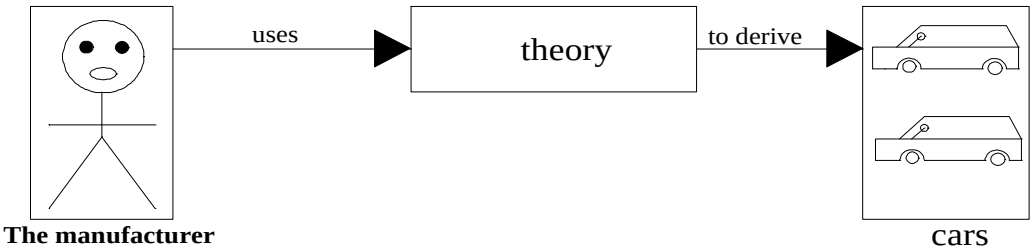


The Derivative Approach of Adding Functions

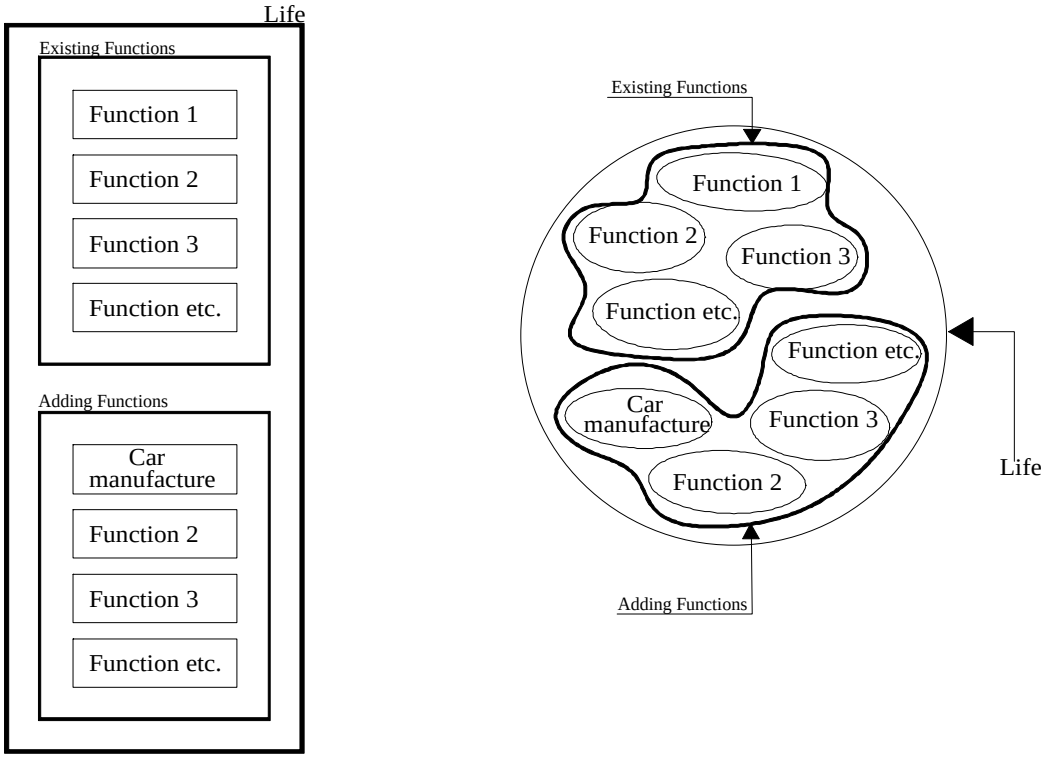
From the previous section we have learned about the functions that makeup life, especially the functions that we add to life. We have also learned about the process of marketing of functions added to life. To better understand the overall process of marketing from start to finish in terms of adding functions, it makes sense for us to provide a typical example of a function added to life related to the process of marketing.

In the previous sections, we have defined life by the representation of two diagrams. We have provided a circle to show both of adding and existing functions; we have also provided a rectangle that shows the same thing. From the first diagrams, we showed couple of functions that makeup life. Those functions are talk, eat, walk, and drive. There are many, many functions that makeup life; here we simply list a few. While we have shown the name of the functions on the first diagram, we did not show that on the second diagram, rather, we showed functions name with number at the end. Since life is made of so, many, many functions, we will never know all of them, it makes sense to reference any function in life by number. This is the reason we show functions by number. For example, since eat is a function of life, rather say eat, we can also say *function 1*, in that case, eat is replaced by function one. Whenever we use number at the end of function, it does not matter which number we use, we can use any number to denote a function. While we name eat *function 1*, we can also name it *function 2, 3, 4* etc. It is a matter of choice; it does not make any difference.

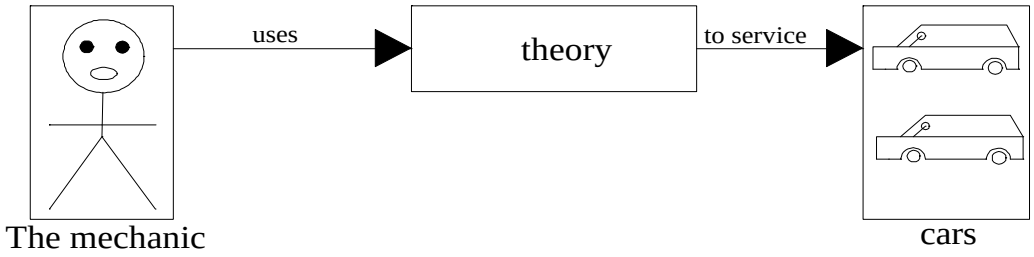
In order to understand better the process of marketing, let's work out a typical example. Assume that a car manufacturer uses some type of theory to derive an instrument which we call a car. While we don't have to know anything about the derivative process for our example here, we can show a typical flow of what the manufacturer does from the following block diagram. The block diagram below is a typical flow of what the manufacturer does. It shows exactly the manufacture uses theory to derive cars.



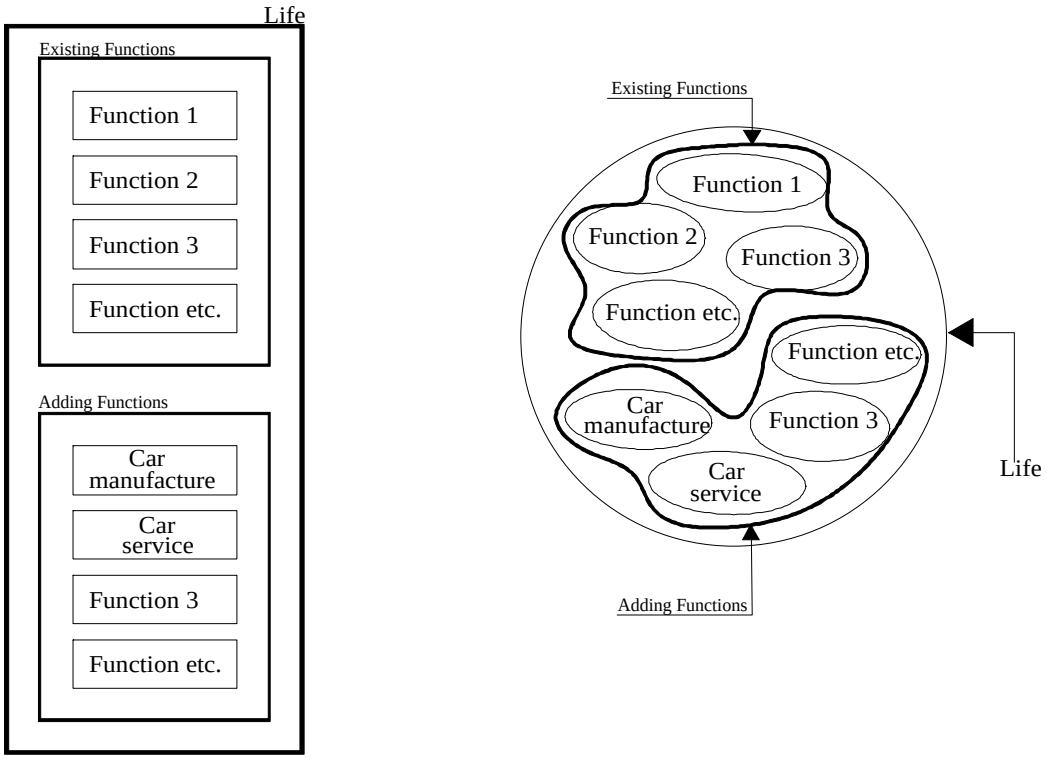
Since we know everything we do in life is a function that we execute, the car manufacture is also a function added to life. From the flow diagram above, we can take *car manufacture* as a function of life. With that, we can put that function in our life diagram which we defined previously as a circle or a rectangle with unlimited number of functions. This function is shown on the diagram below. From the diagram below, we can see that we replace the function with index of 1, by *car manufacture*, which is the name of the function added to life by the manufacturer.



We have just learned a typical example of a function added to life. The function is simply *Car Manufacture*. This function was realized by the manufacturer by applying theory to derive the cars. With that, we can follow this example by adding another function to life. Since cars must be serviced, we can use another example related to the one we just did to show how another function is added to life. We know that the function of a mechanic is to service cars. We can show that example by the diagram below. It shows that the mechanic uses theory to service cars. We can see that *Service Cars* is another function added to life.



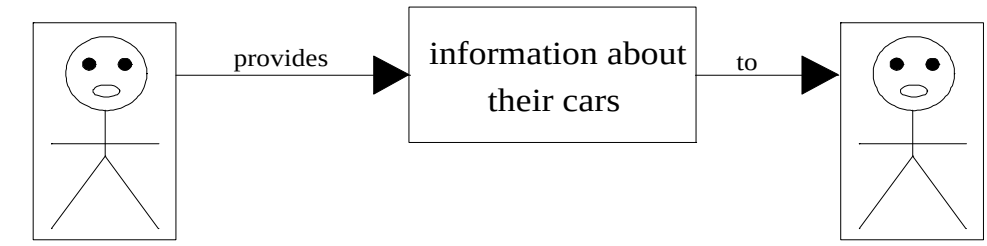
Related to the diagram above, the diagram below shows the function added by the mechanic to the functional system, which is known as life. We simply fill the space where the function with the index number two was. Right now, both our rectangle and our circle contain two functions that have just added to life: *Car Manufacture*, and *Car Service.*

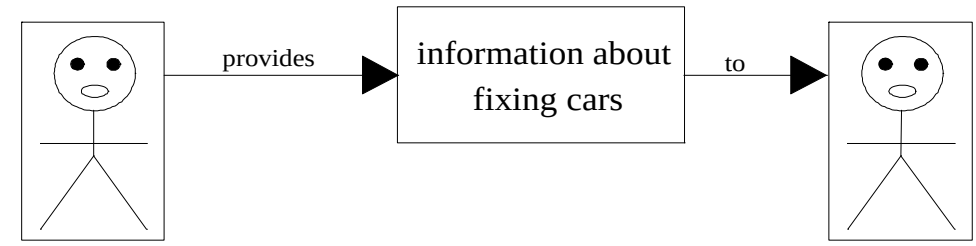


The Marketing Approach of Adding Functions

From the previous section, we have seen the approach of adding two functions in life. We have seen that a car manufacturer used theory to derive cars. We have also seen that a mechanic used theory to service cars. Both *Car Service* and *Car Manufacture* are functions added to life both by the mechanic and the manufacturer. Now that those two functions have been added to life, in order for them to be useful to other people, they must be aware of those functions. As we already said, marketing is the process of providing information to people to make them aware of functions added to life. From what we have learned from the previous section, given that those functions accomplished by instruments or services provided by us, we can say that marketing is the process of providing information to others about instruments and services. We can also say marketing is the process of providing information to us about goods and services.

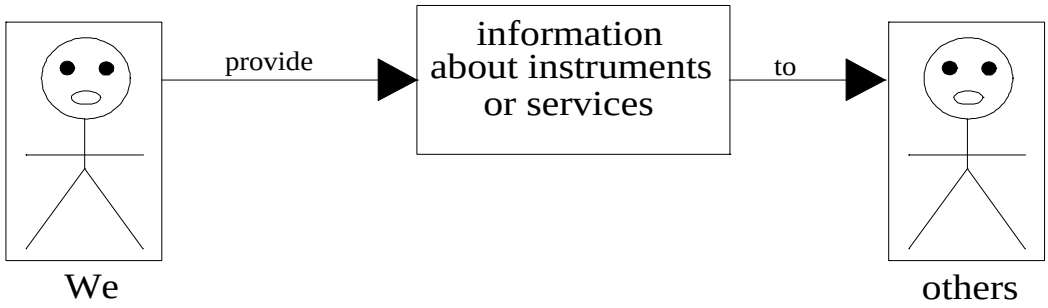
From the two functions we have just added to life—*Manufacture Car*, and *Service Car*—we can show the typical flow of marketing of those functions. The two diagrams below show a typical flow of the functions: one by the car manufacturer and one by the mechanic. The flow of the diagrams below is not absolute. They can be flown anyway we want them. The one shown below is one of them. What is the most important here, is the flow of information provider to us.





Now that we know marketing is the process of providing information about goods and services, we can now do some analysis about that process. From the definition of marketing, we can see one keyword we are familiar with is information. From the previous section, we have learned that the communication link that connect us together enable us to receive information about goods and services. We have also seen that the information about marketing is what flown from one to another or from the goods and

services provider to us. We have already shown that in a flow diagram. To better recall what we have learn, let's show that typical flow again.

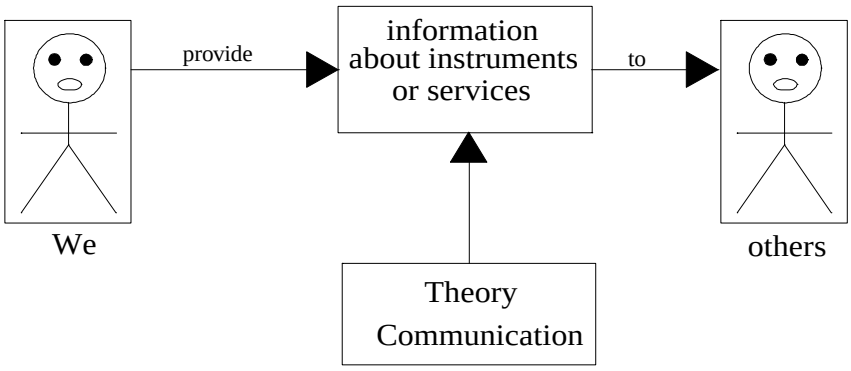


Relationship between Marketing and Information

We have already known that marketing is the process of providing information about adding functions in life. Whenever we use the word marketing, information is what comes to our mind. That makes a lot of senses, since marketing is information itself.

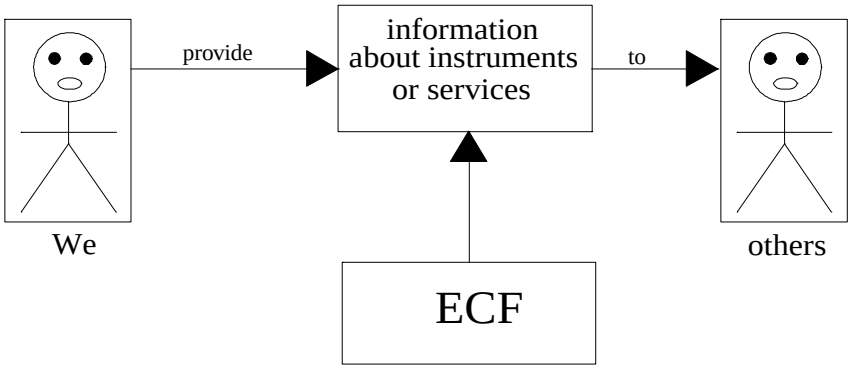
Now that we understand the relationship between marketing and information, we can continue our analysis farther to look at that relationship. From information theory, we have learned that in order for the information to be presented to us in a form that we can understand, it must be related to our parent principles. Related to communication theory, our parent principles enable us to understand communication, it also enable us to correct any error we make when we communicate. By analyzing what we have just said about the relationship of marketing and information, we can see that information theory is related to the theory of marketing. From that relationship, we also see theory communication is also related to theory of marketing. With that relationship, we can see that all characteristics of information is also including in marketing.

From what we have just said above about the relationship of marketing and information related to theory of communication, we can present a better view to see that relationship in the following diagram. The diagram below shows a typical flow of marketing, where theory communication is used as a validation of the marketing information.



When we communicate, we always have a picture of that information in our mind. Another way to say it, since when we communicate we simply exchange information, there is an image of that information that comes to our mind. We understand that information better, when we have a good image of it in our mind. When we don't understand that information, we simply ask questions to enable us to understand it further and to satisfy the reason of communication. Given that marketing is the process of providing information about instruments and services, whenever that information is presented to us, we always have a picture of it in our mind. Since our parent's principles enable us to understand communication better by performing sentence analysis, whenever that information is presented with doubt, we can always perform sentence analysis to enable us to understand it better.

Let's revise the above statement; marketing is the process of providing information about adding functions. Whenever that information is presented to us, we always have a picture of that information in our mind; in other words, we always have a picture about the instruments and the services in our mind. Since we use our parent's principles to analyze information in order for us to understand them, we can use those principles to analyze marketing information to make them understandable as well. The Error Correction Function presented from the diagram below, shows a typical flow of marketing under error analysis. During the error analysis process, any error that is presented in the marketing information can be corrected before it gets distributed. It can also get corrected by the people the marketing information is being presented to, to enable them to understand it.

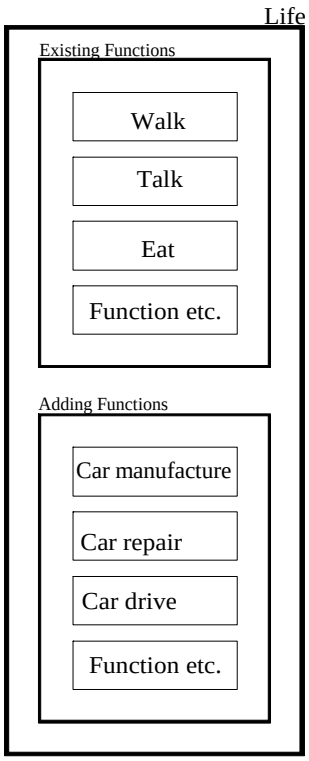


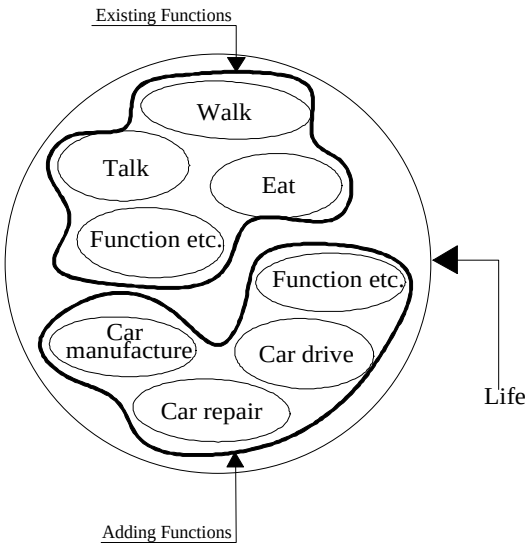
From information theory, we know that there is a relationship between our system and the information itself. For instance, we have learned that in order for the information to be good, it must have a relationship with our system. Related to information, we already know that, after a function is added to life, marketing is the process of making people aware of that function and how it can be useful to life. From that, we can see the marketing process allows us to receive information about useful functions added to life. It is very important to understand that. Given that information always preserves system stability, marketing should always preserve system stability as well. When we talk about system stability, we mean both the physical system and the functional system. It is very, very important to understand that relationship.

Conclusion

To finish this chapter, let's review what we have learned. Life is made of both existing and adding functions. With our ability to apply theory, we have been able to apply theory to add functions to life. Given that we apply theory independently, given that we all don't live in one location, whenever we add a function to life, it makes sense for us to make people aware of that function so it can be useful to them. Marketing is the process of making people aware of useful functions added to life. Those functions can be functions performed by instruments, or services provided by us. Another way to say it, marketing is the process of providing useful information to people about goods and services. Whenever we use the word information, we always think about our communication interface. Since information is what flows through our communication link, and communication enables the flow of information, we can see that during marketing, the communication link does not change; it is still controlled by theory of communication.

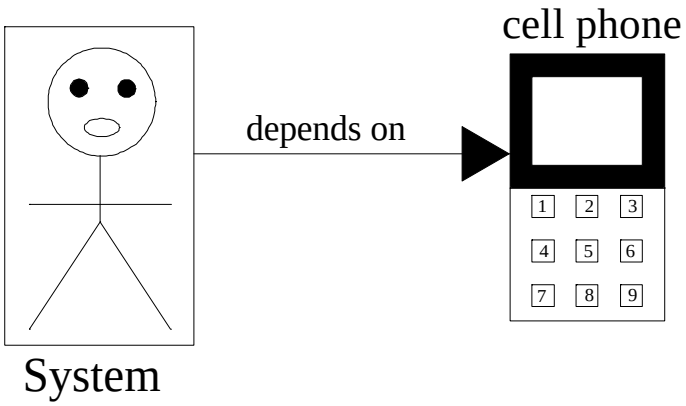
As an example to help us understand the overall process of adding function to life related to marketing, we have shown the process of adding both a car manufacture and a car service functions to life. The diagrams below represent life with those added functions; see exercise number 114 and 114′ for more information.

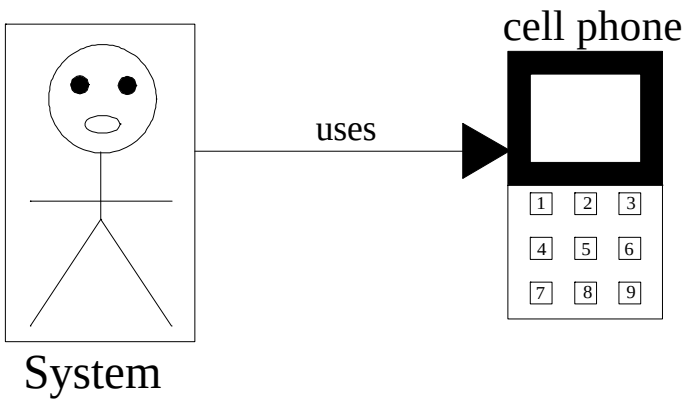




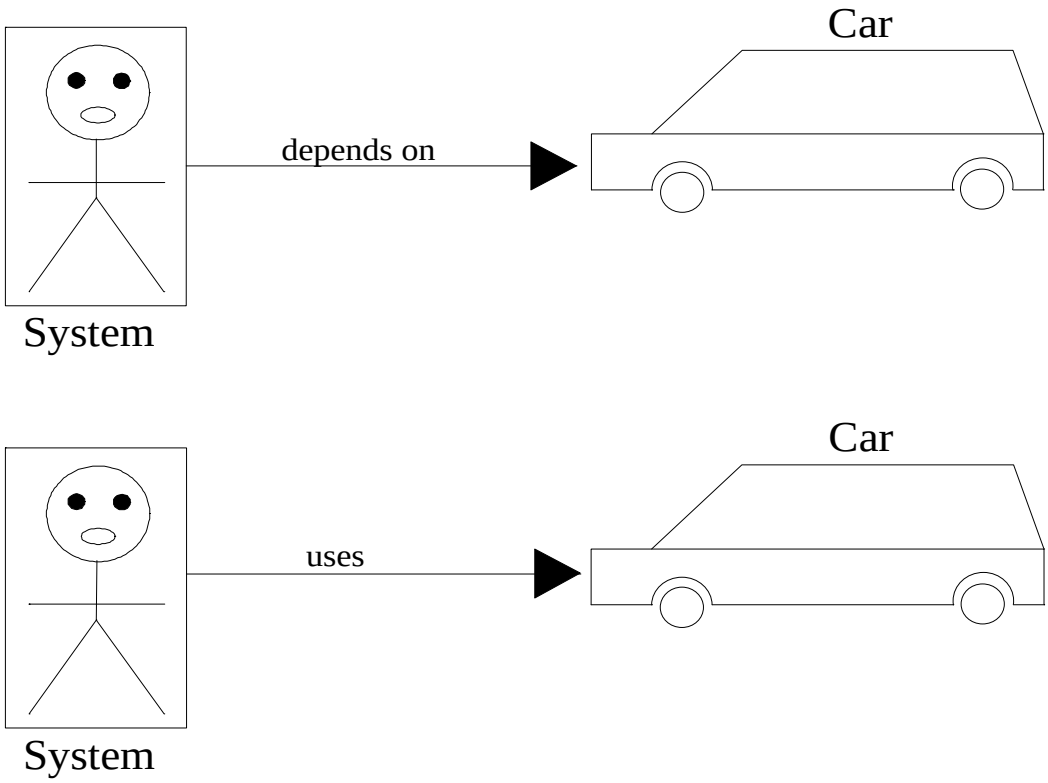
Exercise

102. From the diagram below, choose which one is correct related to the flow of the sentences. The first diagram is flown as *System depends on cell phone*, while the second diagram is flown as *System uses cell phone.* Determine which one between the two is correct and explain why. Redraw the same diagram and using *I* and *We*, rather than the word *System*. To finish, explain the reason the diagram you did not choose is incorrect.





103. Determine which diagram is correct related to the following sentences: *System depends on car* and *System uses car*. Verify which one is correct and which one is incorrect and why. Redraw the diagram by using *I* and *We*, and construct the following sentences: *I use a car to go to work; I depend on a car to go to work. We use cars to go to work; we depend on cars to go to work.* Your verification should be based on the sentences.



104. In the theory of marketing chapter we have provided some examples about functions added to life. We have shown how functions added to life and the process of marketing those functions. From that example, we have shown both a car manufacture and a car service as functions added to life. We have also shown a circle and a rectangle to represent life with the inclusion of those functions. It can be shown that marketing itself is another function added to life. Verify that marketing is a function added to life and represent that function with both an index and by its name in life within the circle and the rectangle. Use the same circle and the rectangle we have used to represent that function and provide a practical example.

105. From exercise number one, you have chosen one diagram from the other and you determine the one you chose was correct. Related to your understanding of theory of marketing, show the correctness of the diagram that you chose. All that we mean, for you to verify the correctness of the diagram that you chose related to your understanding of marketing.

106. From information theory, the following statement was given for characteristic of information. *Information is always given in a manner to satisfy reasoning*. Given that marketing is considered to be information itself, the same characteristic that uses for information also use for marketing. Verify that statement related to marketing.

107. From information theory, we have learned that information always preserves system stability. A table was also given to us to show both the functional and the physical system stability related to information. Given that marketing is also information, the principles that use for information are also use for marketing. With that, we can also say that marketing should always preserve system stability as well.
    a. Verify the above statement by providing an example. You can take personal stability into account.
    b. Verify the above statement by providing an example. You can take both the physical system and the functional system into account.

108. Show your understanding of Instrumentation Theory related to marketing. This is the same as saying verifies your understanding of the instrumentation theory related to the theory of marketing.

109. Show your understanding of Information Theory related to marketing. This is the same as saying show your understanding of the information theory related to the theory of marketing.

110. From information theory and characteristic of information, we have learned that definition of information is very important. Since marketing is considered to be information, it can be shown that function usability is a very important part of marketing as well; verify that. We mean that verify information definition related to function usability in term of marketing. Anther way to take it, is to verify marketing definition related to function usability by providing a practical example.

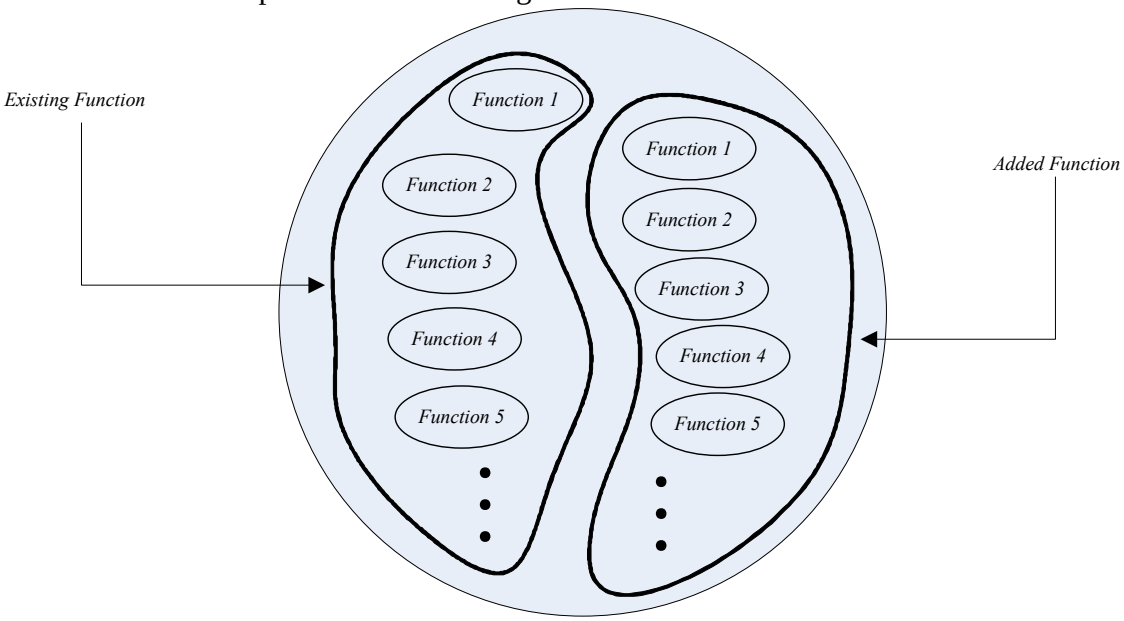
111. Verify, show, or state one or more parent's principles or instructions that are related to the theory of marketing. You can verify them and explain their importance related to the theory of marketing.

112. Show your understanding of Communication Theory related to marketing. This is the same as saying show your understanding of communication theory related to the theory of marketing.

113. We already knew that in order for a system to work, it needs its utilization theory. The way to look at it, the utilization theory of a system needs to apply in order for that system to work. Even without any fundamental, it can be shown that there is no way a system can work with philosophy. Verify that statement by showing that without any fundamental, there is no way a system can work with philosophy by providing a practical example. Again, the question is can a system work with philosophy?

114. We have learned from Theory of Marketing that marketing is a process of marking people aware of useful functions added to life. Related to the life, we

know that life is made of both existing and adding functions. Let's take another look of the visual representation of life again.



Life

At the beginning of the marketing chapter, we have provided an example of functions added to life. We have shown that a *car manufacture* is a function added to life and a *car repair* is also a function added to life. We have grouped both functions to show their visual aspects. From this exercise, you will do the following.

a. Identify and index both the *car manuf*acture and the *car repair* as functions of life. Group both functions by their names and show them in terms of indexing from the visual life represented by the rectangle. Also show them on the circle representation of life by grouping them. Whenever we use the word indexing here, we mean a function name plus number.
b. Since we show the separation of functions added to life and also the existing functions of life. It can be shown that the process of marketing or marketing itself is a function added to life. Verify that and show that in both the rectangle representation of life and the circle representation of life by using the indexing of adding function represented by the terms above. You can also show a practical example.
c. To complete the exercise, from our example at the beginning of the chapter, we have also shown couple of existing functions of life represented by the life circle and rectangle. Use the terms above with indexing to show couple of existing functions represented in your rectangle and your circle. Explain the reason you add those existing functions to your circle or rectangle.

114′. We have learned from Theory of Marketing that marketing is a process of marking people aware of useful functions added to life. Related to the life equation,

we know that life is made of both existing and adding functions. Let's take another look of the life equation again.

$$\mathcal{L}(t)=h(t)+u(t)$$

Life of Time	Existing Functions of Time	Adding Functions of Time
$\mathcal{L}(t)$	$h(t)$	$u(t)$

The terms $h(t)$ and $u(t)$ are represented by the following terms

$$h(t)=\sum_{n=1}^{\infty}h_n(t) \quad \text{and} \quad u(t)=\sum_{m=1}^{M}u_m(t)$$

Where $h(t)$ is considered to be existing functions of life and $u(t)$ is adding functions of life. The visual aspect of life can be represented in terms of both $h(t)$ and $u(t)$ by the following diagrams. The diagram below represents the visual aspect of life with both existing and adding functions.

$\mathcal{L}(t)$
$h_1(t)$
$h_2(t)$
$h_3(t)$
$\vdots$
$u_1(t)$
$u_2(t)$
$u_3(t)$
$\vdots$

At the beginning of the marketing chapter, we have provided an example of functions added to life. We have shown that a *car manufacture* is a function added to life and *a car repair* is also a function added to life. We have grouped both functions to show their visual aspects. From this exercise, you will do the following.

a. Identify and index both the *car manufacture* and the *car repair* as functions of life. Group both functions by their names and show them in terms of indexing from the visual life represented by the rectangle above. Also show them on the circle represented of life by grouping them.
b. Since we show the separation of functions added to life and also the existing functions of life. It can be shown that the process of marketing or marketing itself is a function added to life. Verify that and show that in both the rectangle representation of life and the circle representation of life by using the indexing of adding function represented by the terms above. You can also show a practical example.
c. To complete the exercise, from our example at the beginning of the chapter, we have also shown couple of existing functions of life represented by the life circle and rectangle. Use the terms above with indexing to show couple of existing functions represented in your rectangle and your circle. Explain the reason you add those existing functions to your circle or rectangle.

115. From information theory, we have learned about the level of our intelligence related to information. We have learned that information increases our intelligence. For instance, as information increases, our level of intelligence also increases. That makes sense, since we are an information dependable system, we should gain more knowledge related to information that we receive. Given that marketing are information themselves, it can be determine whether or not our knowledge increases related to marketing. Determine whether or not our intelligence increases related to marketing. Should our intelligence increases related to marketing or not? If not, determine what can cause our intelligence to decrease related to marketing. Intelligence level can be viewed as the level of our understanding.

116. We know that life is made of two set of functions: the existing functions and the adding functions. From what we have learned from this chapter, we know that the process of marketing is to provide information of useful functions added to life. From that statement, it can be shown that only adding functions of life are marketable; verify that statement. In other words, show with a practical example that only adding functions are marketable.

116′. We know that life is made of two set of functions. Those two set of functions are presented by the life equation shown below.

$$\mathcal{L}(t)=h(t)+u(t)$$

Life of Time	Existing Functions of Time	Adding Functions of Time
$\mathcal{L}(t)$	$h(t)$	$u(t)$

The terms $h(t)$ and $u(t)$ are represented by the following terms

$$h(t)=\sum_{n=1}^{\infty}h_n(t) \quad \text{and} \quad u(t)=\sum_{m=1}^{M}u_m(t)$$

Verify with a practical example, only the functions that are included in $u(t)$ are marketable.

117. **Understanding the Theory of Marketing:** By understand exercise number 116 and 116′ above, sometime when we think about marketing, it is better to look at the understood of the theory of marketing related to existing functions rather than adding functions. As we already knew, it is always good to think marketing is information as well.

118. Because the system is theory dependable, it can only believe in theory. Given that we are theory dependable, we can only believe in our utilization theory. Whenever we believe in something else, that develops problems. Verify your understanding of that statement related to the theory of marketing. You may also provide a practical example.

Chapter 12

Understanding the Exchange System Theory

Introduction

The purpose of a given system theory, is to enable the functionality of that system. A system can never function normally without the utilization of that system theory. The theory of a system contains the set of principles that must be used to maintain that system functionality. The terms maintain functionality is similar with the word stability. In order to have stability in a system, it must maintain normal functionality related to time. As time goes, if the functionality of a system remains normal, we always say that system is stable.

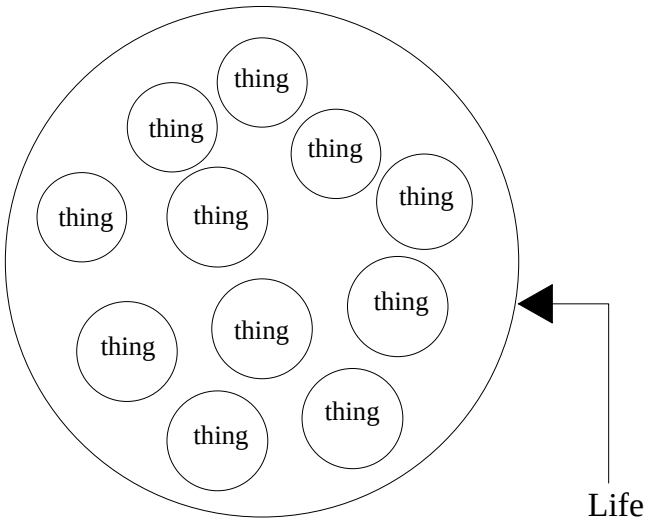
Life is a system that depends on the utilization of our parent's principles. Given that we, the physical system are defined as theory enable, we must always apply our utilization theory in order to ensure our functional system stability. In a given system theory, all set of principles are considered to be important. By disregarding a set of principles in a given system theory, there is no way that system can function normally.

We live in different places; we also live in different countries. Given that everything that we need to live or everything that we need to enable the functionality of our lives locates in different locations, hence there is a need for exchange between us. Given that we are theory enable system and theories are independent entities. Given that we apply theory independently to derive instruments and provide services that are useful in life; it makes sense for us to exchange services that we provide and instruments that we derive within ourselves so they can be useful to others.

In this chapter, we are going to take a look of the exchange system theory. It is very important to understand this chapter and also the exchange system theory itself. A lot of problems in the world are caused by the misunderstanding of the exchange system theory. It is very difficult for someone not to find a problem at any particular day and time that is not caused by the misunderstanding of the exchange system theory. Since there is no way a problem that is caused by the misunderstanding of a theory can be solved without the understanding of that theory, it makes sense for us to understand the exchange system theory.

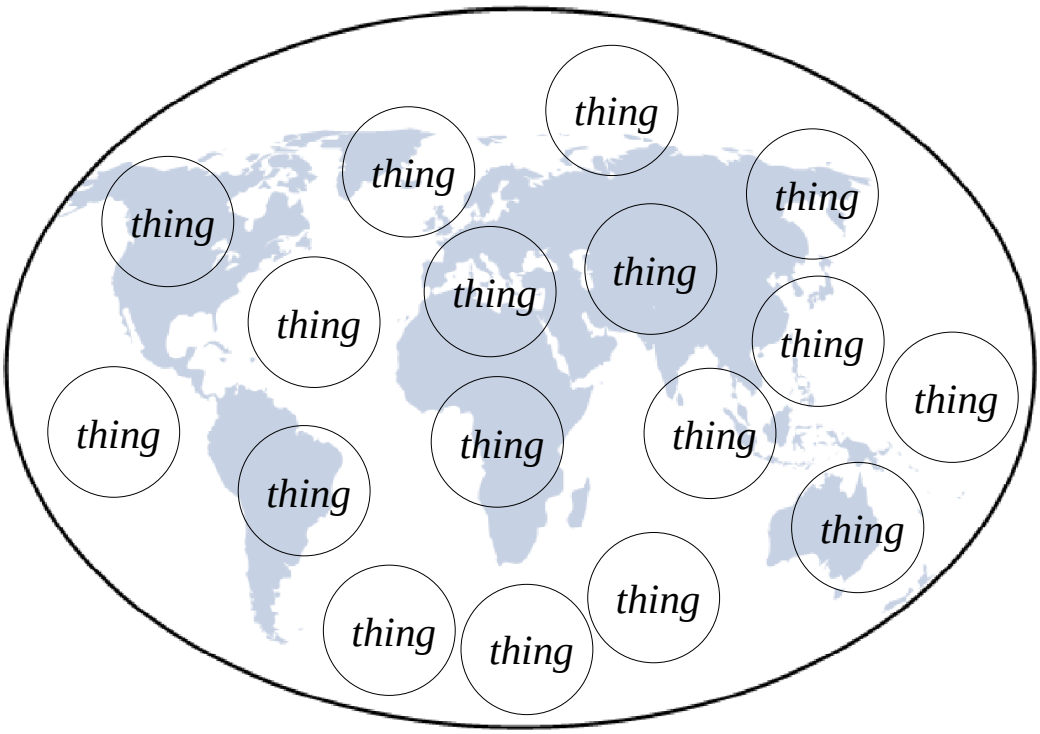
Understating the Functional System

We already know that life is a functional system that makes of a lot of functions. From that definition, we can see that life is a collection of functions. Rather than using the word function, we can also say that life is made of a lot of things. From what we have just said, it is good to present life with the things that it is made of. The diagram below represents life in a circle and includes many things that it is made of. Since we have been very familiar already with this diagram, it is worthwhile for us to see it here again and understand it.



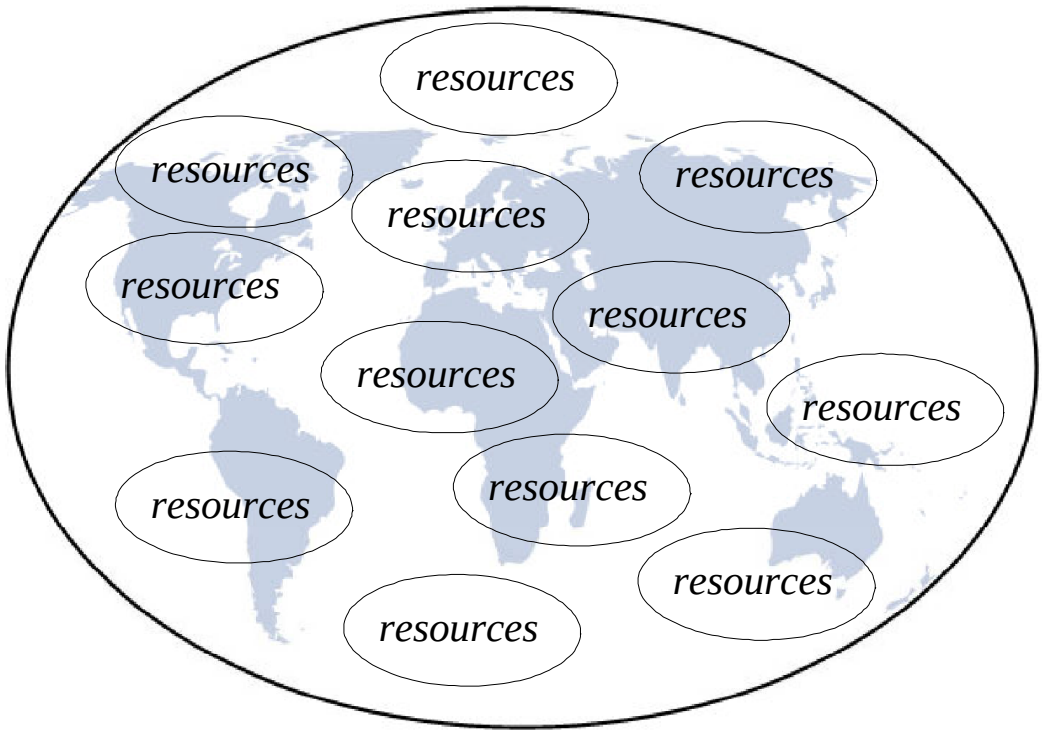
Life is made of a lot of things that are located everywhere. To better understand the location of things that life is made of, it is worthwhile to show another presentation of the diagram above, where we show the location of many things that life is made of.
The diagram below is similar to the one above, it shows that life is made of a lot of things, and those things are locate in many places. We can say that they are located in various locations and countries around the world. The way to look at it, the diagram above represents life as a collection of things, where it did not specify the location of those things. The diagram below is the same as the one above, where it specifies the location of the things that life is made of. Another way to look at the diagram above related to the one below is to take the top one with a world map in the background.

To better understand both the functional system and the physical system, it is better to look at it that way. Life is made of a lot of things that are located everywhere around the word. We the physical system needs those things to live. In other words, life is made of a lot of things that we need to live and those things are located in various places around the world.

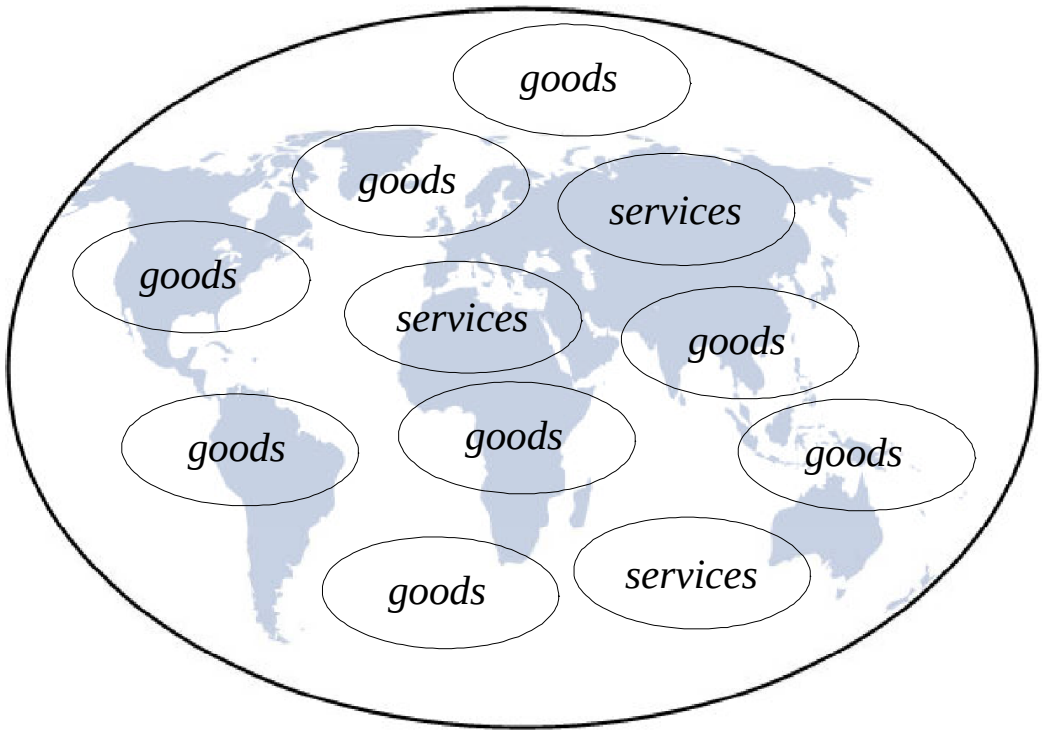


Understating the Exchange System

We live everywhere around the world. We can define ourselves as a mobile system since we move from places to places and we don't stay steady at one location all the times. Given that everything that we need to live may not be present at our current locations, hence there is a need to exchange what we need to live. Whenever we use the word things that we need to live, it is always better to interpret them as resources. With that, we can say that given that all the resources that we need to live are not located at our current locations, there is a need to exchange between us. From what we have just said, we can replace the word things by the word resources in the diagram above. The diagram below is a representation of life, where it shows that resources that we need to live are located in different locations.



As we say previously, we need resources to live and those resources are located in various locations around the world. Rather than using the word resources, it is even better again to use the word goods and services. We can say that we need goods and services to live and those goods and services are not located at the place we are currently present. The diagram below represents life, where it shows that goods and services that we need are located in various places.



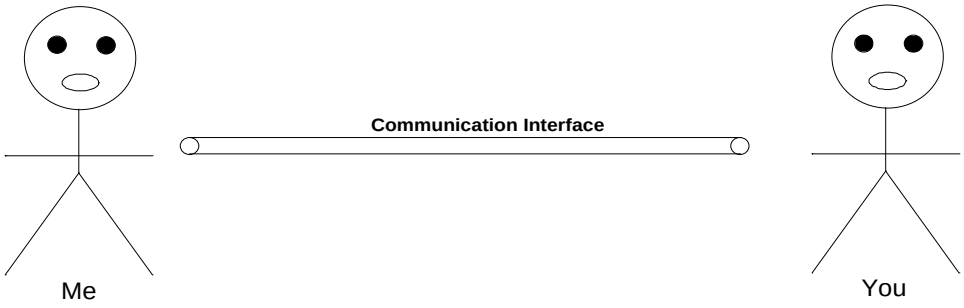
Introduction to the Exchange System

Now that we have a good understand of life. We know that life is made of many things that are located in various places, and we need those things for living. In order to enable the functionality of our lives, we need goods and services that are located in various locations. Given that we, the physical system is defined as a theory dependable system, and we apply theory independently and in group independently to derive functions that are useful in life. It makes sense for us to exchange what we derive so they can be useful to others. Given that everything that we need to live is not located where we are present or reside, it makes sense for us to exchange between each other to make life convenient.

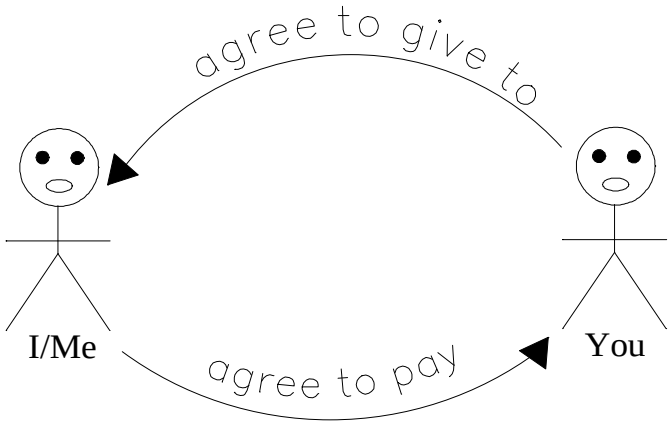
Another way to look at it, since we live in various places and we work in various locations, it makes sense for us to interact to each other to exchange what we do within ourselves to make life convenient.

We are defined as a mobile system. We don't stay in one location all the times. We move from places to places. Given that when we move from places to places we are still functional, it makes sense for us to find resources that we need to live at any place that we present. For this reason, it makes sense for us to interact to each other to exchange goods and services together at various locations that we present.

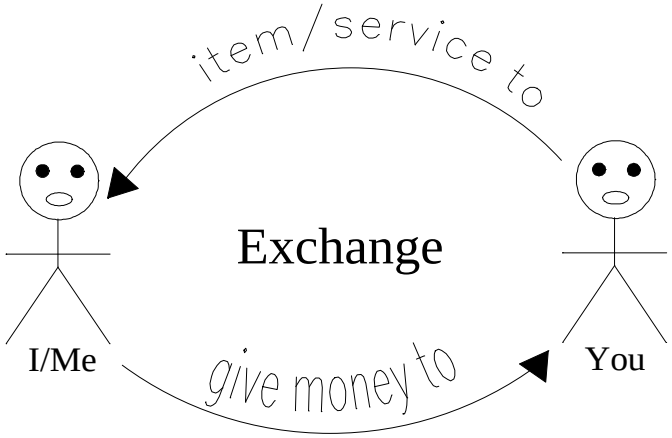
We interface between each other through communication. It is very difficult to find anything that we do within ourselves without the use of communication. Communication is the only way we interact to each other. We use that communication interface to work together; we also use it to exchange goods and services within ourselves. Since we have already been familiar with the diagram of our communication interface, it makes sense for us to show it here again. Below is the diagram of our communication interface. It shows that "me" and "you" interface together through communication.



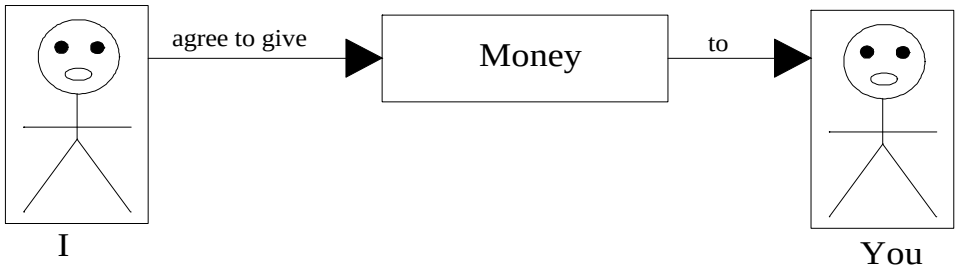
As we said above, we interface through communication to do what we do. That communication interface allows us to work together; it also allows us to exchange goods and services within ourselves. The diagram below shows a typical view of the use of the communication interface for exchange. The way to look at it, from the diagram below, the communication interface is being used for exchange. An exchange is an agreement between the parties. For instance, from the diagram below, the exchange is defined as an agreement between me and you. It does not matter in what form the exchange is being made; it does not matter if the exchange uses money, electronic, goods etc. What matters is that the exchange is always an agreement within the parties. From the diagram below, I agree to pay you, while you agree to give me goods or provide services to me.



As we have learned above, an exchange is an agreement within the parties. We exchange, because goods and services that we need to live are not located where we are present or at our residence, we must interact to each other to exchange. We use the communication interface to interact to each other to perform exchanges. While the diagram above shows that exchange is an agreement within the parties, it also shows a typical exchange that we all familiar with. Given that we all use money or any other alternative or equivalent to exchange, the diagram below represent a typical exchange using money. While we use money from this diagram, it can be replaced by any other mean to enable the exchange. The diagram shows that I give you money, while you give me item or service, which is the same as goods or services. Another way to say it, I agree to give you money, you agree to give me goods or services.

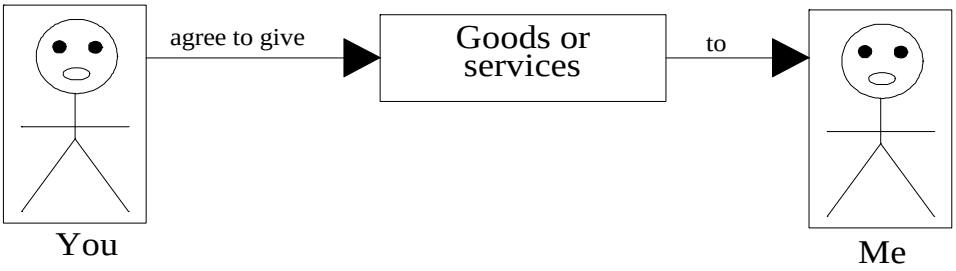


The diagram above shows a typical exchange using money. Since we know that an exchange is an agreement within the parties, it makes sense to show the flow of the agreement in a typical exchange. The diagram below shows the flow of a typical exchange, it shows that I agree to give money to you.

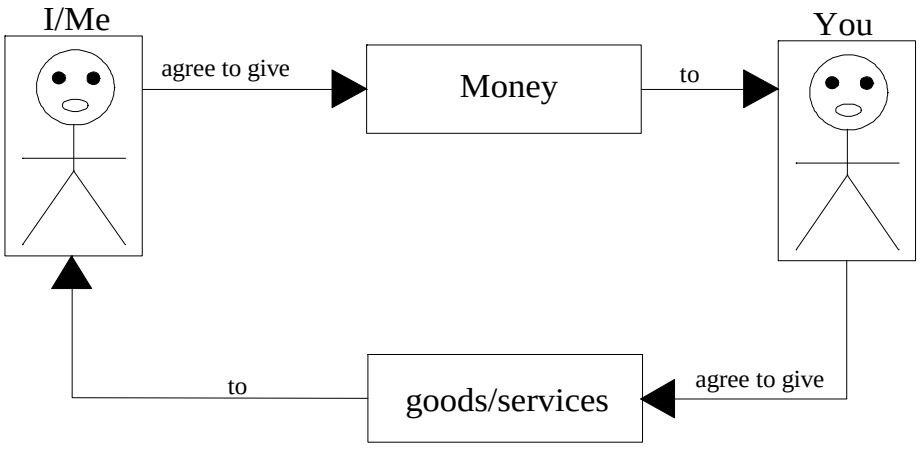


Given that an exchange is an agreement within the parties, given that we use communication to interact together to perform the exchange, in order for the exchange to be completed, both parties must be agreed. In terms of communication, it must flow both ways. The diagram below shows the complete of the transaction from the one above. It shows that, you agree to give goods and services to me. That makes sense, since in order

for the exchange to be completed, I must agree and you must agree, so in this case, both of us agree.



As we previously learned, an exchange is an agreement within the parties. In order for the exchange to be completed, both parties must be agreed. The diagram below shows a circular flow of the typical exchange from above.

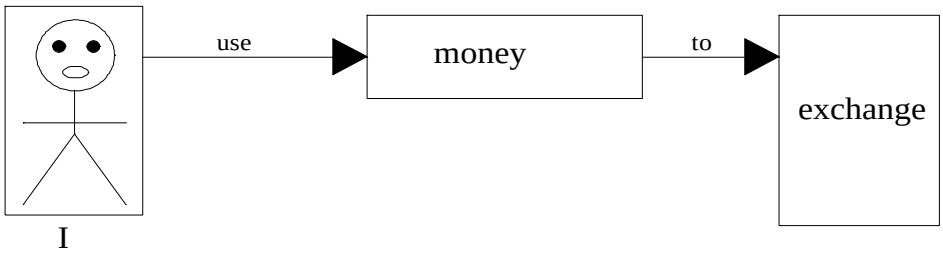


Understanding the Exchange System

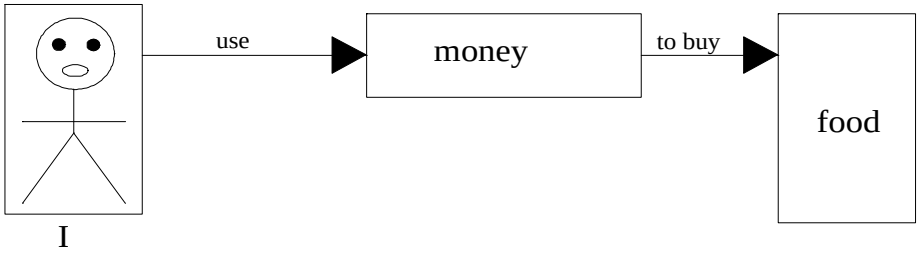
From the previous section with have learned the process of exchange, we have seen that an exchange is an agreement within the parties. To further enhance ourselves, we have shown the flow of that agreement. We have also learned that we interact through communication to perform the exchange. That makes a lot of sense and it is very easy to understand. Since communication is the only way we interface to each other and in order to exchange we have to interface with each other, therefore we must use communication during the exchange process.

While the diagram above shows the typical flow of an exchange in order for us to view it as an agreement within the parties, in order to have a better understanding of the exchange itself, it makes sense to present it in a way so the exchangeable elements can be

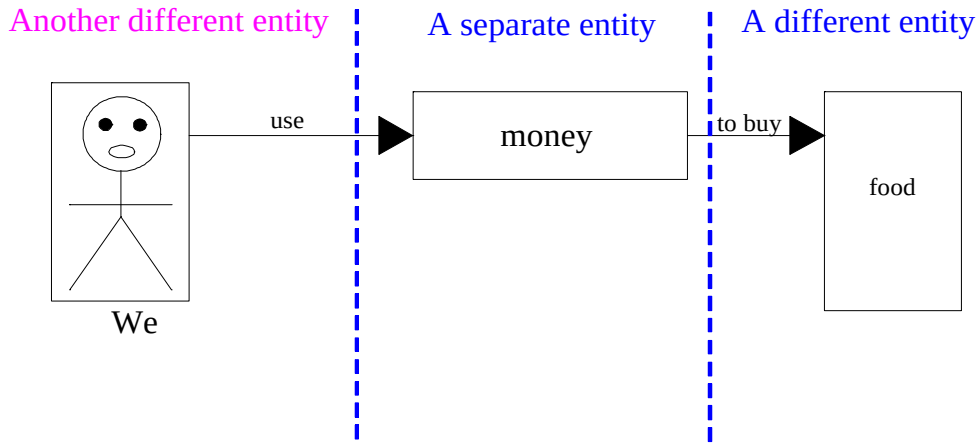
viewed as separate entities. The diagram below shows a typical flow of an exchange. It shows that I use money to exchange.



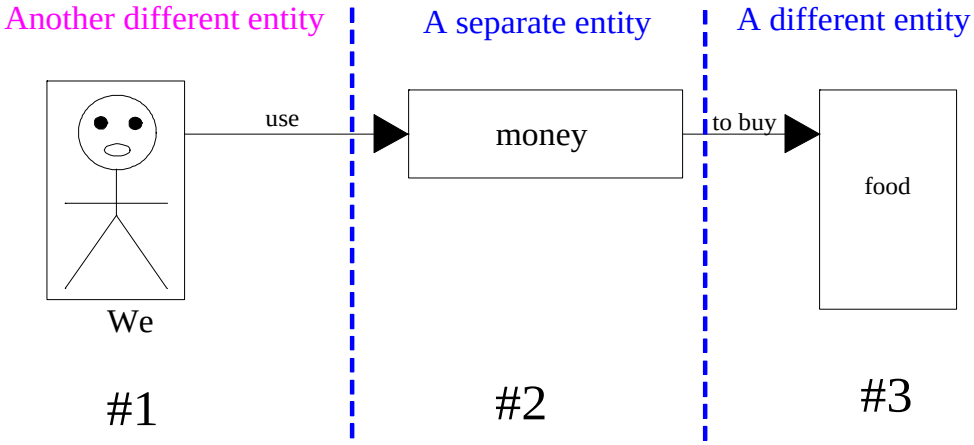
The diagram below is derived from the one above. The way to look at it, the diagram above is not specific, while the one below is specific. In the one above, it shows that I use money to buy food. As we say before, money does not have to be the only mean to use, any other mean can be replaced in the flow.



As we said at the beginning of this section, in order to have a better understanding of the exchange process, it is always good to view the exchange elements as separate entities within the exchange. It is also good as well, to understand the parties that are included in the exchange. What we mean by that, we mean that it is always good to understand both the exchangeable and the non exchangeable entities during the exchange process. The diagram below shows a flow of an exchange process. It shows that we use money to buy food. In this diagram, we separate the entities in the exchange. From left to right and the middle, we see three different entities. The one to the left is the physical system—us—which is a non exchangeable entity. The one in the middle is money, which is an exchangeable entity, and the one to the right is food, which is another exchangeable entity.

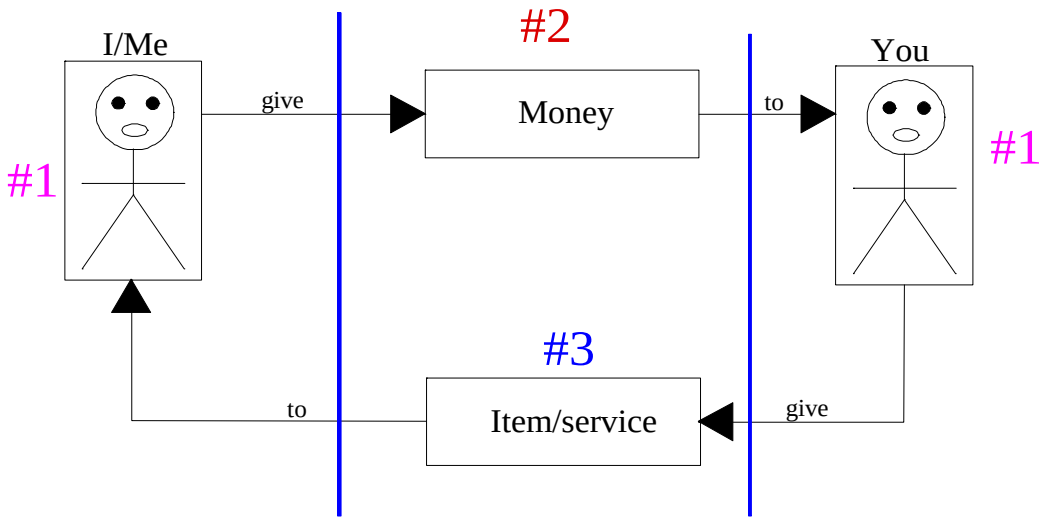


To better understand the separation of the entities that include in the exchange above, we separate each entity by number. We label them from number one to number three, where number one is the physical system, which is us; number two is money, while number three is food.



To better understand the separation of the entities that make up the exchange, we simply detach all of them to represent them physically as separate entities. That is very easy to understand within the exchange itself. We know that we, the physical system are different from money. The food that is being exchange is also different from money. So what we have here, we have three entities that are completely different from each other. The physical system is different than money; money is different than food, and the physical system is different from the food entity as well. Whenever we perform an exchange, it is very important for us to understand and differentiate the entities that include in the exchange.

The diagram below shows the circular flow from the ones we saw above. The agreement is flown within both parties. Similarly to entity separation above, in this diagram, we separate the entities and the parties that participate in the exchange. From this one, both the physical system, me and you are identified as number ones, while money is number two, and item/service is number three. What is important here, all entities that are being identified are different and separate from each other. It is very important to understand that.



Understanding the Exchange System Related to Communication

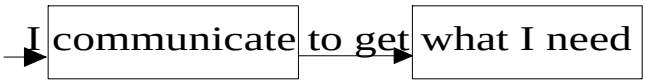
From the previous section we have learned about the usage of our communication interface during an exchange. Although we did not emphasize about the usage of communication related to exchange, however if we paid close attention, we should have seen that communication is what drive the exchange. That makes sense, since we already know that we use communication to get what we need, there is no surprise here to learn that the exchange is driven by communication.

We are very familiar with the sentence depicted below. It shows that I communicate to get what I need. To better understand the relationship between what I need and communication, we simply separate both communication and what I need. From the diagram, we can see that communication is number one, and what I need itself is number two.

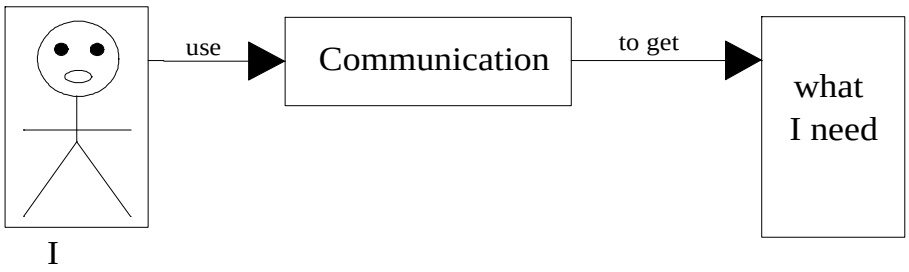
#1 #2

I communicate to get what I need

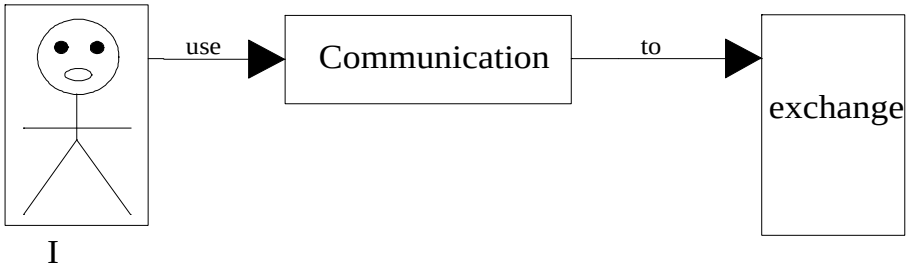
Now, let's separate both number one and number two into two boxes and draw the arrow to show the flow of the sentence. The diagram below shows the separation of number one and number two into boxes and with the arrows to show the flow of the sentence.



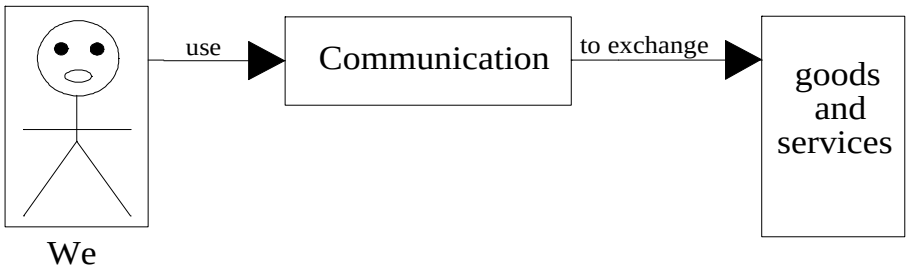
Finally, we use the diagram below to show the flow of the sentence by separating the entities that makeup the sentence. It shows that the physical system, I as a separate entity and communication is what is driven to get what I need. In this case, the communication itself is shown as a separate entity and what I need as well.



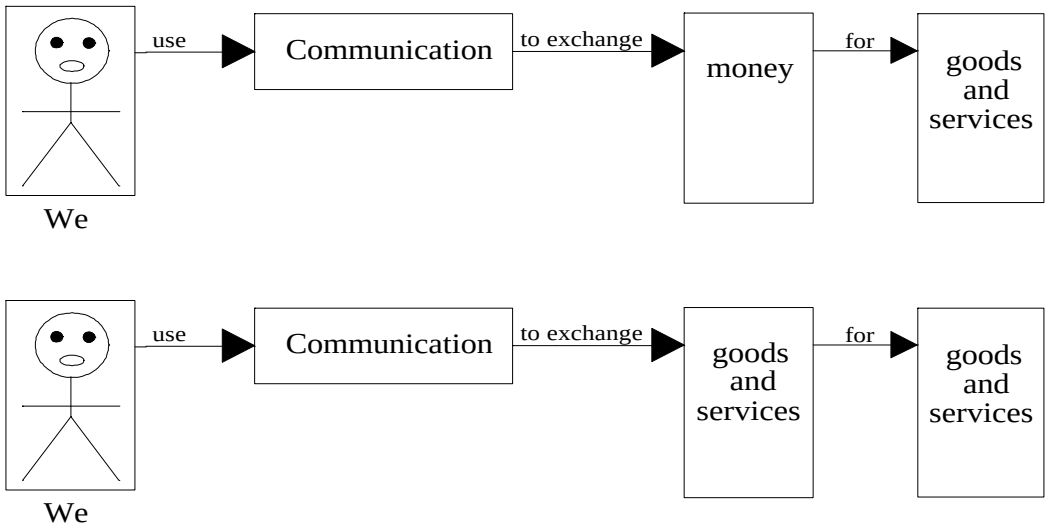
Since exchange is what we should set our focus on, rather than using the phrase what I need, it is better to use the word exchange. With that, we can use the above diagram and replace what I need with the word exchange. The diagram below shows the replacement of the phrase what I need by exchange. From this diagram, we can see that the exchange is driven by communication and it is viewed as a separate entity from communication. It is very important to understand that.



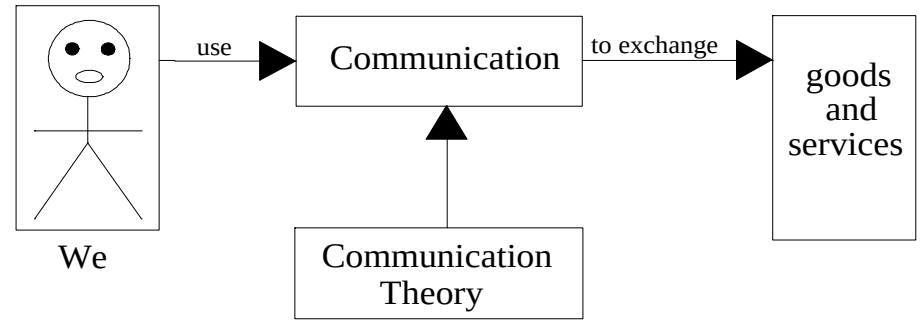
Whenever we use the word exchange, we always have goods and services in mind. While we can say we use communication to exchange, since goods and services are what we exchange, we can also say that we use communication to exchange goods and services. With that, we can use the same diagram above to include goods and services, which is what we exchange. This diagram shows the flow of a typical exchange. It shows that we use communication to exchange goods and services. In this case, we can see that goods and services are separate entities and the exchange is driven by communication.

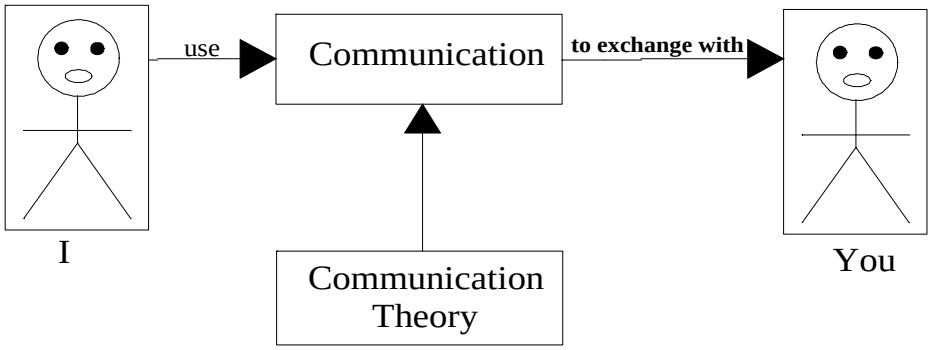


We know that an exchange is an agreement within the parties. During an exchange, both parties are in the receiving side. In this case, one receives from the other one and vise versa. For example, in a typical exchange, one party can receive money, while the other one can receive goods and services. As we said before, it does not matter in what form the exchange takes place; it does not matter if the transaction is being done electronically; it does not matter if credit, trust or delay payment is being used in one side, what matters is that the parties agree to exchange and time and transaction delay does not matter. The diagram below shows the flow of a typical exchange using money. As we can see, the exchange is driven by communication. To the right, we can see that both the money and the goods are separate entities. We can call them exchangeable entities or exchangeable elements. The second diagram shows goods and services are being exchanged rather than money.

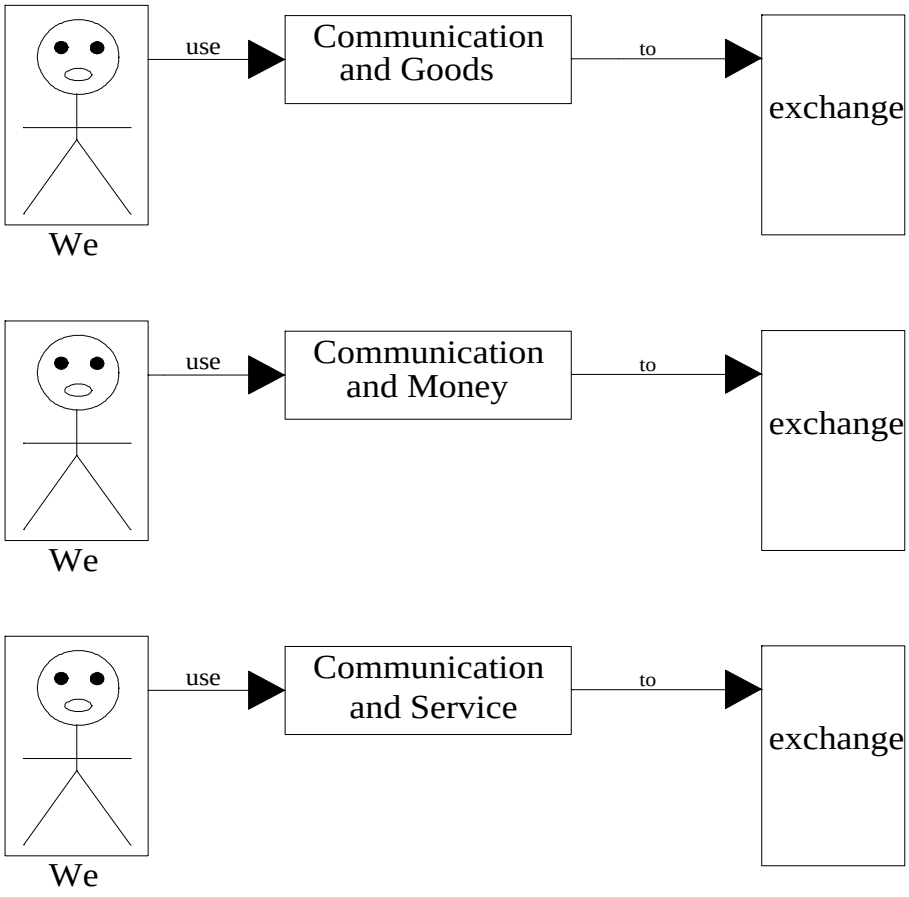


Now that we know communication is an important factor in exchange, and the exchange is driven by communication. It makes sense for us to further our analysis about the exchange and communication so we can increase our understanding of the exchange itself. We have learned how to communicate without error from our parent's principles. From our parent's principles, we have also learned how to correct any error we make in communication. We also know that those set of principles that help us how to communicate without error, constitute the theory of communication. With our understanding of theory of communication, we know that whenever we make error in communication, we also make error in what we do. That should not be a surprise, since everything that we do is preceded by communication. Now, that we understand both communication and the usage of communication in exchange, it is worthwhile to present a picture of a typical exchange which is driven by communication related to communication theory. The diagram below shows the flow of a typical exchange. It shows that the exchange is being driven by communication. Given that communication theory is the basis of error analysis and correction, the diagram shows theory communication controls the flow of the exchange. During the exchange process, any communication error will get corrected by theory of communication to allow the exchange transaction to proceed correctly. Since an exchange is an agreement within the parties, the second diagram shows that I and you use communication to exchange. It shows that the exchange is being driven by communication and communication theory controls the flow of the *exchange communication*. During the exchange communication process, sentence analysis can be used to correct any communication error to allow the exchange to proceed without error. It is very important to understand the communication aspect of the exchange related to theory of communication.

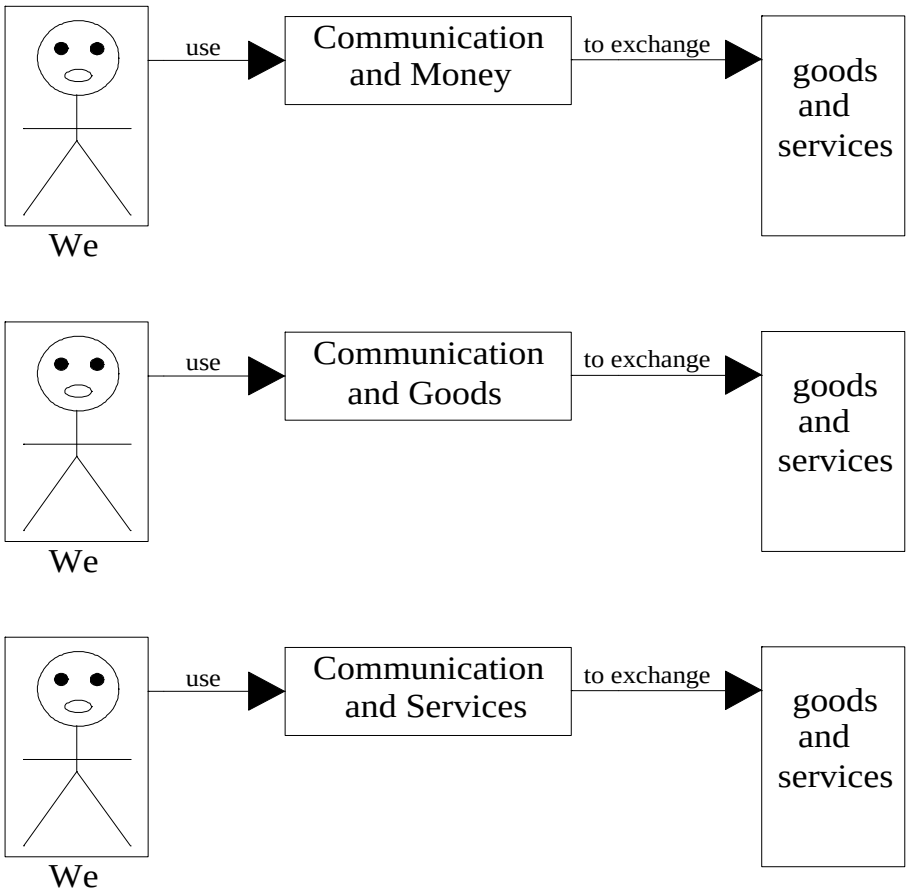




We have just learned about the separation of communication form the exchange itself. Given that our exchange is driven by communication, we have been able to separate the communication entity from the exchange and also the exchange itself. With that, we have used theory of communication as the basis of error analysis during the exchange communication. Since when we perform an exchange we communicate about that exchange, since an exchange is an agreement within the parties, since all parties that participate into an exchange are in the receiving side, since an exchange is driven by communication related to the exchangeable entities, it makes sense here to show both communication and the exchangeable entities driven the exchange combined. The diagram below shows a typical flow of that, it shows that we use communication and goods to exchange. There should be no surprise here or ambiguity in terms of understanding. The way to look at it, the exchange process is driven by both communication and goods. That makes sense, since communication initiate the exchange and goods or money are used in the transaction, it makes sense for us to combine both of them as the ones that drive the exchange. The diagram bellow shows that we use communication and goods to exchange, the second one shows that we use communication and money to exchange, while the third one shows we use communication and service to exchange. As we said before, while we use money here, it can be replaced by any other exchangeable entities or credit and trust.

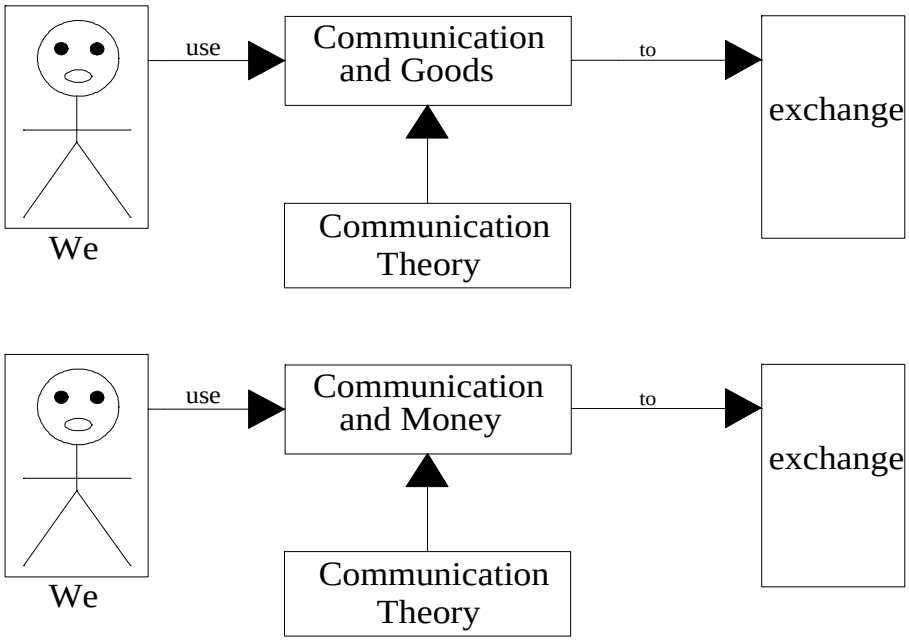


As we said before, an exchange is an agreement between two parties. During the exchange process, both parties are in the receiving side. During a typical exchange process, we can use communication and money to exchange for goods and services. As shown below, both communication and money are used for the exchange of goods and services. The second diagram shows that the exchange for goods and services is being driven by communication and goods, while the third one shows that it is being driven by communication and services.

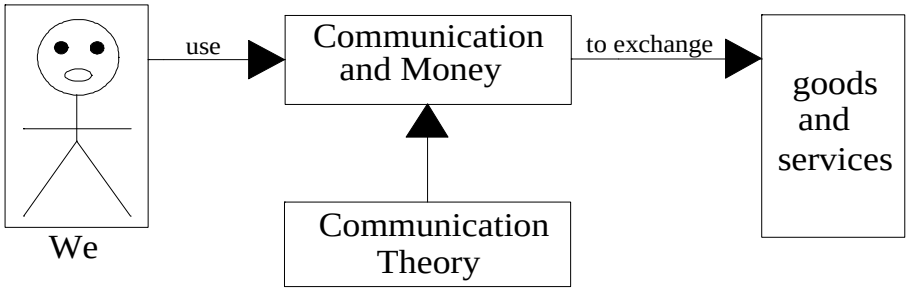


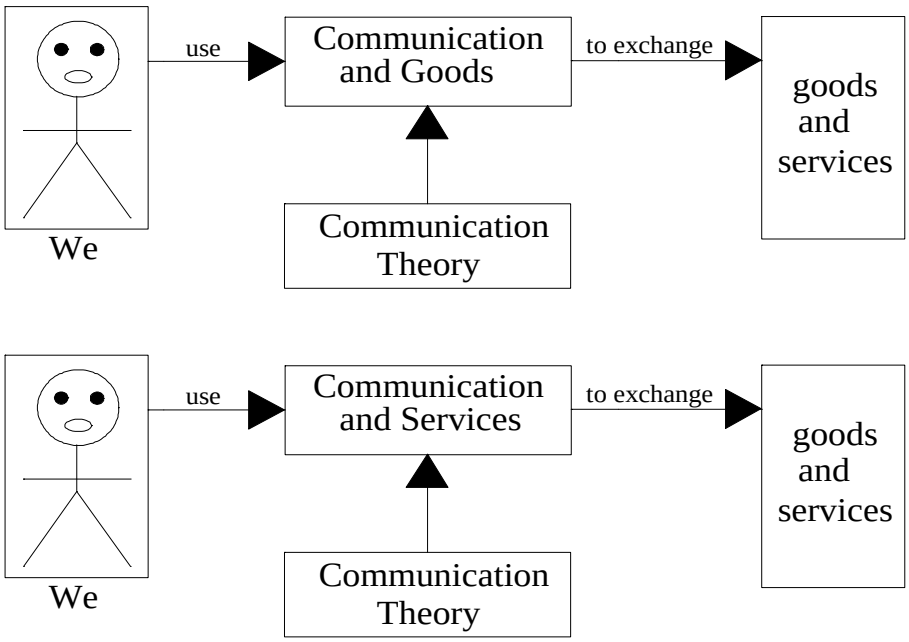
We have learned that the exchange is being driven by communication and the exchange entities combine. In order to better understand the process, it makes sense to view the exchange entities are part of the communication. For instance, during a typical exchange, we communicate about the goods that are being exchanged. Since the communication link is controlled by theory of communication, during the communication process, any error that is presented can be identified and corrected with the use of communication theory. To better understand the process, it is worthwhile to present the flow in a diagram as shown below. The diagram below shows that we use communication and goods to exchange. It also shows that the exchange is being driven by communication and goods and it shows that theory of communication is used to control the link. In terms

of error analysis, the second diagram shows that theory communication is used to control the flow of communication and money during the exchange.



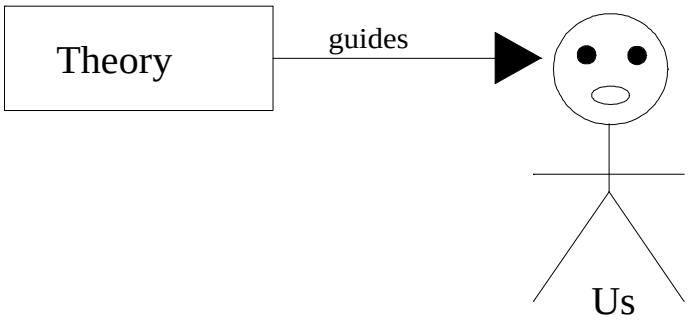
Since we exchange goods and services and communication is driven the exchange related to the exchange entities, it makes sense to represent the diagram above with goods and services included. The diagram below shows a typical flow of an exchange where communication and money is used to exchange goods and services. It shows that communication theory is used to control any error that can be presented during the exchange process. The second and the third diagram show the same process, but it shows that communication and goods and communication and services are being exchanged instead. What is more important here is the fact that the communication and the exchange entities combined are being controlled by theory of communication during the exchange process.





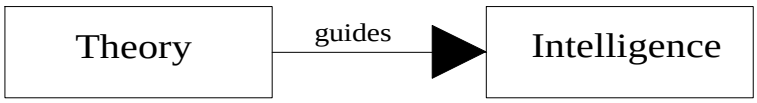
Understanding Ourselves Related to the Exchange System

We, the physical system are defined as a self programmable system. By being self programmable, we are also theory dependable. The phrase self programmable, is similar to theory dependable. By being theory dependable, we can apply our utilization theory to enable the functionality of our lives. Whenever we use the term self programmable, the word self controllable always come to our minds. Basically, the phrase self programmable and self controllable are similar to each other. To better understand our physical system and its dependency on theory, it is always good to present it as shown by this diagram. This diagram shows that our functionality depends on our utilization theory and it always guide us all the time to do what we do.



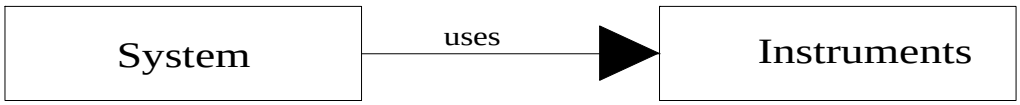
Given that we are an intelligent-system, it is always good to know the relationship of theory related to our intelligence. The way to look at it, given that we are a theory

dependable system, our intelligences always needs theories to give them ideas. In other words, our utilization theory guides our intelligences to enable us to do good things in life for our functionality. To better understand the relationship of our intelligence related to its dependency on theory, it is always good to present them by a flow diagram. This diagram shows that theory guides our intelligences. It is the same as saying that our intelligences depends on our utilization theory.



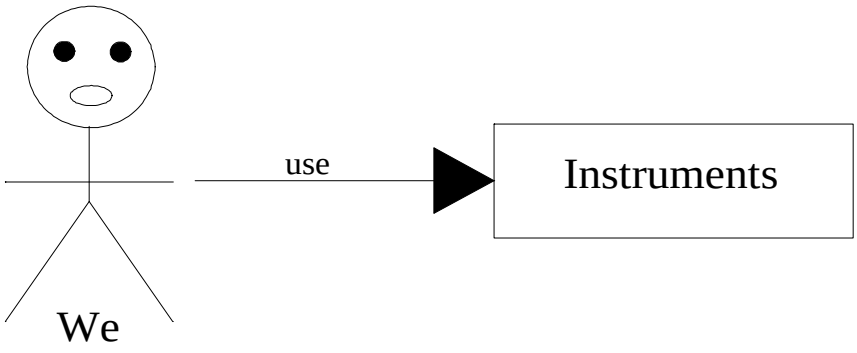
Now that we understand ourselves related to our utilization theory, now that we understand the way our intelligence works related to our utilization theory, it is worthwhile to look at life related to ourselves. Our physical system functions by applying methods. We can say that we live by applying methods. For instance, in order for us to stay alive, we must eat, so eat is considered to be a method. As we have learned at the beginning of this chapter, we need resources to live and those resources are located in various places. We call those resources goods and services. Since everything that we need to live is not located at our present place or residence, we need to exchange goods and services in order to make our lives convenient. We use the term exchange system to denote the process of exchanging goods and services.

As we define ourselves as a theory dependable system, we also know that our system can be viewed as a collection of instruments that work together to enable the functionality of our lives. In terms of instrument identification for example, we can identify our hands as attached instruments of our system. From instrumentation theory, we know that our attached instruments are used to enable the functionality of our lives. We also know that any external instruments that are used with our attached instruments are also used to enable the functionality of our lives as well. What do we mean by external instruments, we mean non natural instruments? To better understand the relationship of external instruments related to our physical system, it makes sense to present that relationship by a block diagram. The diagram below shows that our physical system uses instruments. For instance, we can say that we use a particular of instrument to provide a function in life. We can also say that we use those instruments to do something useful for us.



The diagram below is similar to the one above, except the one below gives us a better visual aspect of ourselves. From the diagram below, it shows that the physical system is completely separate from the instruments. The way to look at it, the physical system uses the instruments; both the physical system and the instruments are completely separate entities. From this diagram, we see ourselves are completely different from the

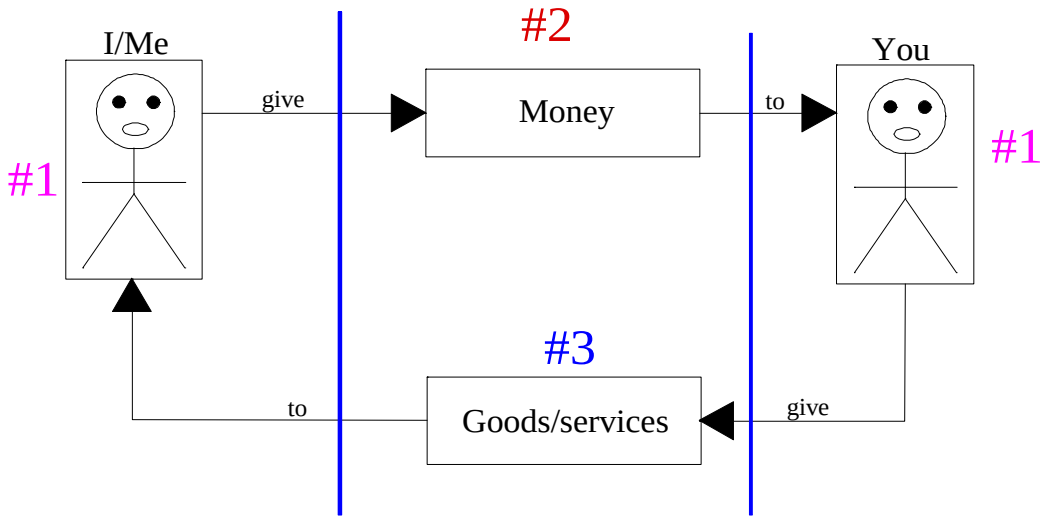
instruments that we use. That makes a lot of sense and it is completely easy to understand. We go to the store we buy a computer, we are not the computer. The computer is completely a separate entity from us. In this case, we can see that we are human and the computer is an object. It is very important to understand that.



Understanding Ourselves Comparing to Exchangeable Entities

From the previous section, we have seen that we are a theory dependable system and we use external instruments in life to provide us additional functionality. We also know those external instruments that we use in life are completely separate entities from the physical system. Related to the exchange system, it is worthwhile for us to look at the above relationship related to the exchangeable entities.

Earlier from this chapter, we have learned that goods and services that we need to live are located in different places and we must exchange them for the convenience of our lives. We have also learned that whenever we perform an exchange, the items that are being exchanged, which we call, exchangeable entities are completely different from our physical system. We have used our useful block diagram to separate and label both the exchange entities and our physical system. As a recall of what we have learned, let's show that block diagram here again. From the diagram below, we can see that I exchange with you by giving you money and you provide me with goods/services. From this diagram, we can clearly see that money is completely a different entity from the physical system—me and you—and goods and services are also completely separate entity from the physical system—me and you. The money entity is completely different from goods/services. In this case, we can see that money is a different entity from goods and services is also a different entity from money. It is very important to understand the exchangeable entities and be able to differentiate them as well.



By looking at this section and the previous section, we can see that there is a similarity. From the previous section, we have learned that we are a theory dependable system and we depend on our utilization theory to enable the functionality of our lives. From the previous section, we have also learned that we use external instruments in our lives and those instruments are separate from our physical system and they are completely separate entities. In this section, we learn that the goods and services that we exchange are completely separate entities from our physical system. We have been able to separate and identify those entities. We have identified them by numbers and we clearly see and think that there are different. The most important relationship between this section and the previous section is that our physical system depends on our utilization theory, but uses external instruments. It is very important to understand that relationship.

A theory is defined as a set of principles that enable the functionality of a system. Our utilization theory is defined as set of our parent's principles that enable the functionality of our lives. We can also say that our utilization theory contains principles that enable life to function normally. Whenever we use the term functionality of life, it is always good to look at the word stability as well. As we already know that, life is a function. We live by performing or executing functions. A system functions normally when it is stable. Life functions normally, when it is stable; our lives function normally, when we are stable. Hence, from the explanation we have just given, it is very easy to see the similarity between the term normal functionality and the word stability. From what we know about our physical system stability and our utilization theory, we have learned that the stability of live can only maintain by the utilization of our parent's principles. From what we know about life and our utilization theory, we know that the stability of life can only be maintained by the application of our utilization theory. It is very important to understand that. Compare what we have just said in connection with exchangeable entities, it is not possible for the functional system stability to be maintained by exchangeable entities. The way to look at it, our utilization theory is the set of our parent's principles that can only be used to maintain both our physical and our functional system stabilities. Although we use exchangeable entities, they cannot maintain our

physical system stability. Exchangeable entities are considered to be physical entities and they can never bee used to maintain our physical system stability. Given that the functional system depends on us and we depend on our utilization theory, those physical entities cannot provide stability for our functional system as well; see exercise 132 and 132′ for more detail. It is very important to understand that.

Conclusion

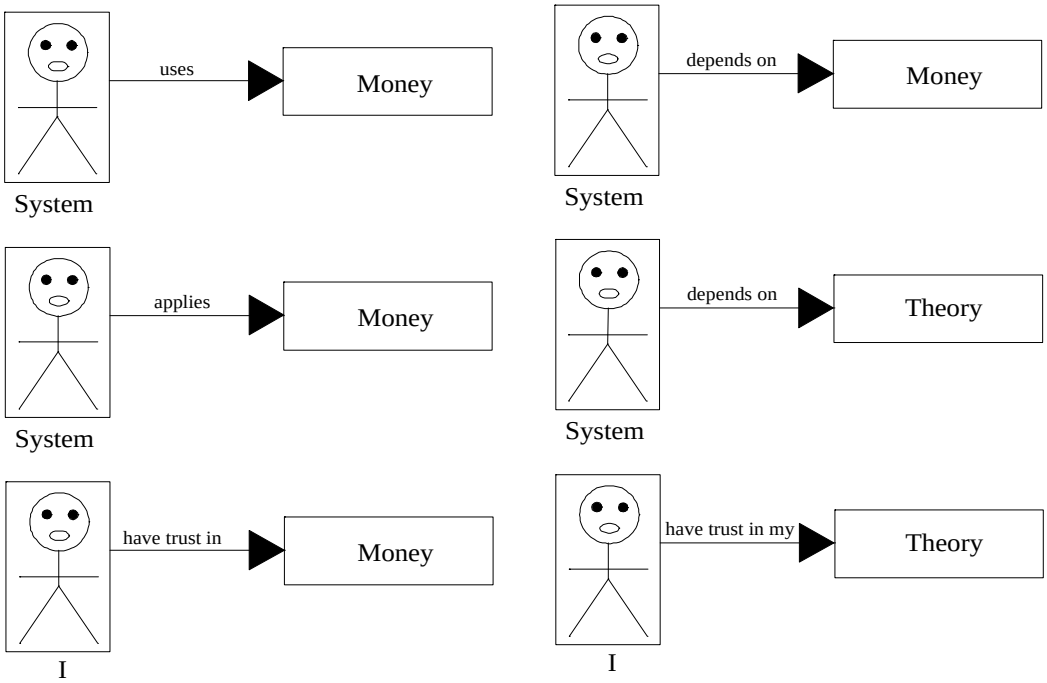
We live in different places and we also move from places to places. Given that the resources that we need to live at not located at the places we are present, we need to exchange goods and services among ourselves to make our lives convenient. Whenever we talk about exchange, we always mean buy, sell, trade or any other form of exchange. We name goods and services that we exchange, exchangeable entities. Given that we are a communication enable system and we only interface to each other through communication, we use that communication interface to enable us to exchange goods and services. With our ability to observe and differentiate, we have been able to distinguish and differentiate entities that we exchange among ourselves. We call the entities that we exchange, exchangeable entities, and we call ourselves the physical system, non-exchangeable entity.

Our physical system is defined as a theory dependable system. By being a theory dependable system, we can use our utilization theory to give us ideas to do what we do. Our intelligence which enables us to do things depends on our utilization theory. Our utilization theory is the set of our parent's principles that we use to enable our lives to function normally. In other words, the application of our utilization theory enables the continuity of normal functionality of our lives. While we exchange and use goods and services, they are not considered our parent's principles and they cannot ensure our physical system stability. Goods and services that we exchange in life are considered to be physical entities and they can never be maintaining our system stability. Those exchangeable entities are not sustainable. They cannot ensure our system stability; at some point of time, they will not be maintainable, but our utilization theory will keep us going for a long time. Our theory will keep us going for all times to come. Those exchangeable entities cannot maintain both our personal and our physical system stabilities, but our utilization theory can maintain both our personal and our physical system stabilities. While those physical entities cannot maintain our functional system stability, but our parent's principles can maintain our functional system stability. It is very important to understand our utilization theory comparing to exchangeable entities.

Exercises

119. State two or three parent's principles or instructions that are related to the exchange system theory and show their importance.

120. Show which one of the following is correct and explain the reason you choose the correct one and leave the one that is not correct alone. Redraw the diagrams and use the word "I/We". For the last one, use the word "System/We".



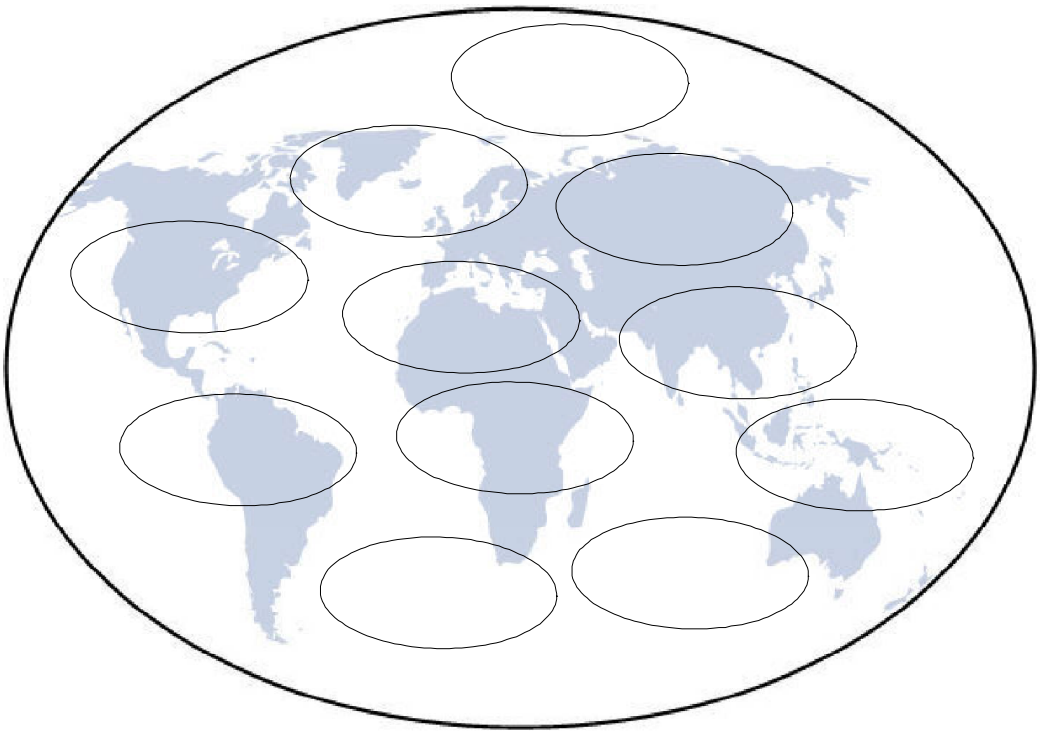
121. From the exchange system theory, we have learned how to separate the exchangeable entities. We have learned how to differentiate them as well. For example, from a typical exchange, we can identify and separate the exchangeable entities. We can also identify and separate the parties that are including in the exchange as well. In other words, in a typical exchange, we can identify both the exchangeable elements and non exchangeable elements.
    a. From the following exchanges, identify and separate the exchangeable entities. Identify and separate all non exchangeable entities as well.
        - I use money to buy a soda
        - I work for money
        - I pay you to fix my car
        - Yesterday I traded my car in the dealer
    b. Define each entity identified from the above exercise. In other words, define both the exchangeable and non exchangeable entities.
    c. In your own words, define the terms exchangeable and non exchangeable entities. By defining those terms properly, you should be able to answer this question: when an entity is exchangeable and when it is not

exchangeable; which is the same as saying, what is considered to be an exchangeable and non exchangeable entity.

122. From the exchange system theory, we have learned that goods and services that we need to live are located in many, many places. Since we live in different places, we need to exchange those goods and services in order to make our lives convenient. This is very easy to understand. By looking at the world around us, we can see exactly what we have just said. Disregard the way we say it, it is always better for each of us to see exactly what we are talking about. With that, it is worthwhile for each of us to answer this question.
    a. Why an exchange system is needed?
    b. According to how you answer the above question, show the importance of that exchange system related to the exchange system theory.
    c. From your part b above, if you see that there is a need for exchange, you maybe able to see the importance of the exchange system theory as well; elaborate that.

123. We already know that the reason we exchange goods and services, because what we need for living are not located where we present or at our residence. We can also say that the resources that we need for living locate in difference places, so we exchange them between us in order to get what we need.
    a. Use the table to list couple of items that you need for living. Those items can be goods and services. Name the locations or the addresses of those items, and state the methods you use to get them.
    b. Use a map as shown below or any transparency on a map to locate those items. Write the names of those items on the places that they are located on the map. As we said earlier, those items can be goods or services. Once you locate the items locations on the map, use an ellipse or circle to identify the location and write down the items names. The map you use can be your city map or any other map you wish.
    c. From the items that you located and the method that you used to get each item, state why you use this particular method.

Items Names	Items Locations	Exchange Methods
Item Name 1	Item Location 1	Method 1
Item Name 2	Item Location 2	Method 2
Item Name 3	Item Location 3	Method 3
Item Name 4	Item Location 4	Method 4
Item Name 5	Item Location 5	Method 5



124. Show your understanding of the exchange system theory related to the theory of instrumentation. This is the same as saying show your understanding of instrumentation theory related to the theory of marketing.

125. Verify that our utilization theory is not an exchangeable entity. Which is the same as saying that verify that our utilization theory is not exchangeable.

126. From the theory of marketing, you have shown that only adding functions are marketable. Related to the exchange system theory, verify the correctness of that statement.

127. Base on your understanding of the exchange system theory; verify the following with a practical example.
- Difference between exchangeable entities and the physical system—yourself
- Difference between exchangeable entities and our utilization theory

128. Verify your understanding of the exchange system theory related to the system and system relationship. This question is the same as the one below. Depend how you approach it, you can do either one of them.

129. Show the importance of the exchange system theory related to system and system relationship. This is the same a saying show the importance of system and system relationship related to the exchange system theory.

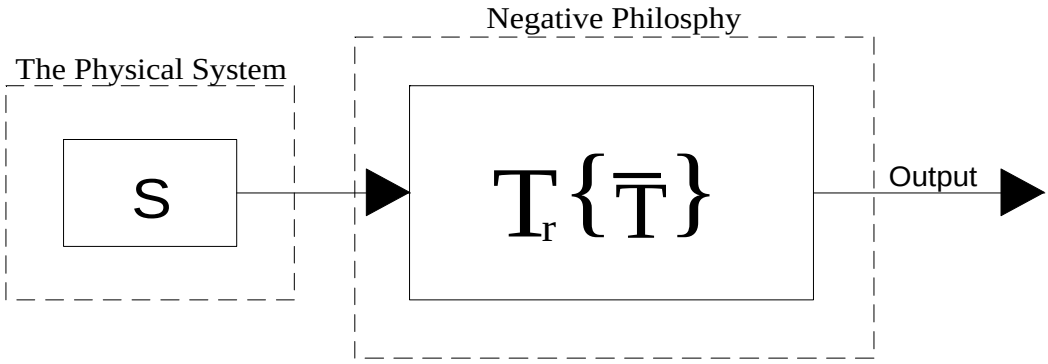
130. We know that problems are not physically defined. We define a problem as a negative philosophy that enables life to function abnormal. The way to look at it, the application of negative philosophies develops problems. Those can only be solved by dropping those philosophies and learning and applying our parent principles. The fact that we are a theory dependable system, our intelligence always depend on theory and it needs theory to get ideas on how to do things. When we disregard our utilization theory, our intelligence simply depends on our philosophies. Since our philosophies are not related to our system, when we depend on them, we simply develop problems. To solve those problems, we must always learn and apply our utilization theory. Our utilization theory includes the exchange system theory. The exchange system theory is defined as set of principles that enable us to exchange goods and services. Whenever we disregard or misapply the exchange system theory, we simply develop problems in life.
    a. Take your time to think about the above paragraph
    b. State or list couples of problems that are caused by misapplying or misunderstanding the exchange system theory.
    c. From your understanding of the exchange system theory, shows that those problems could have been avoided if the exchange system theory was understood and applied.

130′. We know that problems are non physical entities. We define problems as negative philosophies or the application of negative philosophies. Given that our intelligence always needs ideas to work, whenever we disregard our utilization theory, we can no longer provide goods ideas to our intelligence, in this case, philosophies are always the alternative. Given that our system is not related to our philosophies, whenever we disregard our utilization theory and adapt our philosophies, we simply create problems. From what we have learned about problems development and problems solutions, we have come with the following relationships provided by the equations below. In both equations, both the right terms and the left terms are interchangeable.

$$T_r\left\{\overline{T}\right\} = problem$$

$$T_r\left\{T\right\} = solution$$

From the above equation, we can see that we develop problems by disregard our parent principles and apply our philosophies, while we solve problems by applying our parent's principles. Comparing the above equations with the preceding statement above, we can see that they match very well. From the diagram below, we can see that the negative philosophies are outside the system. By inspection, we also see the application of the negative philosophies by the system is what develops problems. In other words, problems develop by misunderstanding and misapplying our utilization theory, but solvable by applying our parent's principles.



From what we have learned from the explanation above, related to the exchange system theory, we can conclude that we develop problems whenever we misunderstand and misapply the exchange system theory and we solve problems whenever we understand and apply the exchange system theory.

a. Take your time to think about the above explanation
b. Identify and list couple of problems that are caused or have been caused by misunderstanding and misapplying the exchange system theory.
c. From your understanding of the exchange system theory, show that those problems you have listed and identified above could have been avoided if the exchange system was understood and applied.

131. From the exchange system theory, we have learned three mains reason that an exchange system is need. Given that we need to apply our utilization theory to enable our system to function normally, we can say that the exchange system theory was given to us by our parent to prevent us from having problems in life. By understanding it that way and the following, we can see why and exchange system is needed. We have provided three reasons why an exchange system is needed; let's list them again.

- We are a theory dependable system; we apply theory independently to derive methods that are useful in life. Since we apply theory independently and different methods are derived from theory, many of us can derive different type of methods that are useful to life. With that, it makes a lot of senses for us to exchange those methods within ourselves so they can be helpful to each other.
- Resources that we need to live are located in different places. Those resources are not located at the places we are present. It makes sense for us to exchange those resources among ourselves in order to make life convenient.
- We are a mobile system, we move from places to places. Given that when we move from places to places our lives are still functional, it makes sense for us to exchange goods and services at the locations we move to in order to enable the functionality of our lives. When we move from places to places, it is not practical for us to carry

everything that we need to live. Many things that we need to live are not movable or transportable. It makes sense to exchange goods and services that we need to live in order to make life convenient for us.

a. Take your time to think about the above explanation
b. Provide a practical example related to the reason of exchange for each case listed above.
c. Depend how you answer part b above for the 3rd case; you don't have to do this one. Verity this statement by providing an example or a typical application, since we are a mobile system, when we move from places to places, it is not practically to carry everything that we need to live. Show that you move from location to location and it is not practical for you to carry everything or items that you need to live. You can make a list of things or items that you need to live and show that it is not possible to move with them from locations to locations. Given that things or items that you need to live may depend on other things or sub items, you may need take them into consideration as well.

132. From the exchange system theory, we have learned that exchangeable entities cannot provide us with stability. While we use exchangeable entities in our life, but they can never maintain our system stability. Our system stability can only be maintained by our utilization theory. Given that we are a theory dependable system and we depend on our utilization theory to enable the functionality of our live, we must always be able to differentiate our utilization theory and other things like exchangeable entities. The way to look at it, exchangeable entities can be considered as physical entities and they are not sustainable related to time. It is always good to understand that. The way to look at it, our intelligence depends on our utilization theory, but not physical or exchangeable entities.

a. Take your time to think about the above explanation
b. Show that with a practical example whether or not that exchangeable can maintain our system stability.
c. By now, you should already know that there is a similarity between the physical system stability and personal stability. Verify with a practical example that exchangeable entities cannot maintain or provide personal stability as well.

132′. We the physical system is defined as a theory dependable system. By being theory dependable, we use our intelligence to apply our utilization theory to enable the functionality of our lives. Given that we apply theory independently, we can develop different methods that are useful in life. To make life convenient for ourselves, we exchange those methods among us. Given that the resources that we use in life are located in various locations, we exchange those resources among ourselves to make our lives convenient. Give that we are a mobile system, when we move from places to places, we are still functional, it makes sense for us to exchange goods and services at different locations. As a mobile system, we cannot transport everything that we need for living; it makes sense for us to exchange things that we need for living at different locations.

While we exchange goods and services that we use in life, however we still depend on our utilization theory. Those goods and services that we exchange cannot provide us with stability. Only our utilization theory can maintain our system stability. Those goods and services that we exchange are considered to be physical or exchangeable entities, they are not sustainable. They cannot provide us with stability. It is very important to understand our utilization theory and goods and services, which we call exchangeable entities that we exchange in life. Since our intelligence depends on our utilization theory to function, only that theory can ensure our system stability.

From the physical system equation, we have learned the following relationship between our physical system and its utilization theory.

$$S = U_T$$

Although our parent provides us with our utilization theory that we should apply to enable our system to function normally, some of us believe that our philosophies can ensure our system stability by dropping our parent's principles. Given that the system was not derived by our philosophies, it is a mistake to assume that it can function by our philosophies. By taking it this way, we can modify the above equation and call it a mistaken equation. By modifying the above equation, we have the one below, which we call the mistaken equation.

$$S = Philosophy$$

Since many people have different philosophies, we can modify the above equation again to accommodate for many people and many philosophies. By modifying the above equation, we have.

$$S = (many\ people) \bullet (many\ philsophies)$$

Now, to make the terms shorter, we replace

$$many\ people = x$$

$$many\ philosophies = y$$

By doing so or original equation becomes something like that

$$S(xy) = \left(\sum_{n=1}^{N} x_n \right) \left(\sum_{n=1}^{N} y_n \right)$$

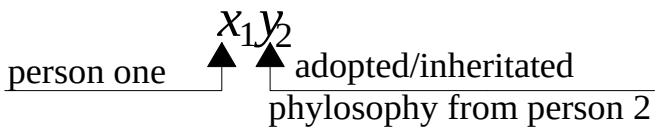
By expanding the terms, we have the polynomial presented below

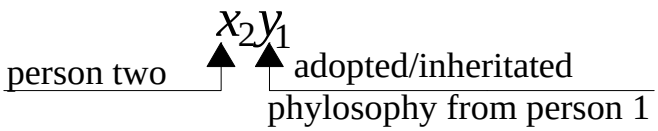
$$S(xy)=(x_1+x_2+x_3+\cdots+x_n)(y_1+y_2+y_3+\cdots+y_n)$$

Where the *x*-terms are considered the number of people and the *y*-terms are considered to be their philosophies. If we were going to use 2 or 3 terms expansion, we would have something like that, where

$$S(xy)=x_1y_1+x_2y_2+x_3y_3+x_1y_2+x_1y_3+x_2y_1+x_2y_3+x_3y_1+x_3y_2$$

The diagram below shows the meaning of the terms





By take a closer look on one of the last 3 terms, we can see that it looks like a change in each person in term of philosophy, so we can call it a delta. So, we can rewrite the last three terms as

$$x_1(y_2+y_3)=\Delta x_1$$

$$x_2(y_1+y_3)=\Delta x_2$$

$$x_3(y_1+y_2)=\Delta x_3$$

By doing the replacement above related to the delta's, we have the original equation for the 3 terms like

$$S(xy)=x_1y_1+x_2y_2+x_3y_3+\Delta x_1+\Delta x_2+\Delta x_3$$

a. Take your time to think about the above explanation
b. We know that the above system equation will never be stable. Now, by replacing the philosophy terms with the set of our parent's principles, we have

shown that the equation becomes very stable. We did that by letting the philosophy terms equate to the set of our parent's principles as shown below.

$$\sum_{n=1}^{N} y_n = k$$

Then we have something like that

$$S(x) = k\sum_{n=1}^{N} x_n$$

$$S(x) = (x_1 + x_2 + x_3 + \cdots + x_n)k$$

c. From the part b above, we have shown that only our utilization theory can maintain our system stability. We have learn that goods and services that we exchange and use in life cannot maintain our physical system stability. We have learned that our stability can never be maintained by those exchangeable entities. Those entities are not sustainable related to time. This can be shown or proved from the equation given above. Use the equation given above to determine whether or not exchangeable entities can maintain our system stability. You can also use the equation below instead.

$$S(xy) = (x_1 + x_2 + x_3 + \cdots + x_n)(y_1 + y_2 + y_3 + \cdots + y_n)$$

d. We have already learned a lot about personal stability. We should already know that there is a similarity between personal stability and our physical system stability. In other words, there is a relationship between the overall system stability and personal stability. Depend how your do the part above, verify with a practical example, whether or not exchangeable entities can maintain personal stability.

133. Show your understanding of life related to the exchange system theory. This is the same as saying, show your understanding of the exchange system theory related to life.

133′. Based on your understanding, show the relationship of the life equation related to the exchange system theory. The life equation is given below with explanation on the table.

$$\mathcal{L}(t) = h(t) + u(t)$$

Life of Time	Existing Functions of Time	Adding Functions of Time
$\mathcal{L}(t)$	$h(t)$	$u(t)$

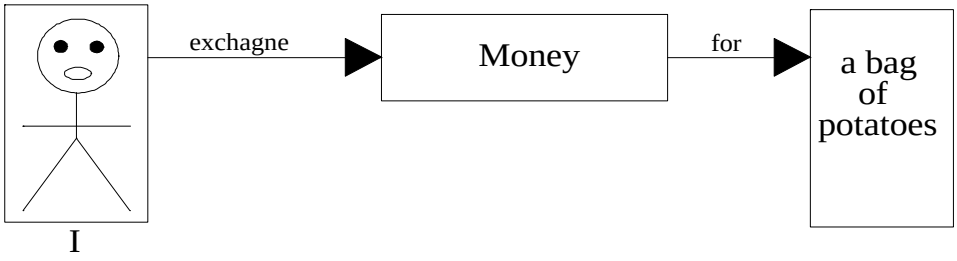
134. We already know that a problem is a negative philosophy. Problems are developed by misunderstanding and misapplying our utilization theory.
    a. Refer to the **Problem Analysis and Solution Related to History** exercise; find a particular problem from history that was created by the misunderstanding or misapplying of the exchange system theory.
    b. Show how the problems could have been prevented or avoided by the application of the exchange system theory.
    c. There are many problems from history that have been caused by the misunderstanding of the exchange system theory. As we have learned previously, the resources that we need to live are located in various places. Given that we live in different parts of the world; given that we live in different countries, it makes sense for us to exchange among ourselves so we can make life convenient. By understanding the exchange system theory; we know that there is no need for one to harm each other for resources. There are several reasons we exchange resources. First the resources are located in various places. Second, we apply theory independently to derive methods, so it makes sense for us to share those methods among ourselves for convenience. Third, we are a mobile system, we move from places to places. When we move to places, we are still functional; it makes sense for us to get everything that we need to live in any place that we are present. In this particular case, exchange resources make it convenient for us.
    d. Use the above paragraph as a baseline to derive a movie or play that deal with the exchange system. In this movie, show the application of the exchange system theory related to the understanding of the theory. You can relate the problem from history and show that there is no need to harm each other for resources with the understanding of the exchange system theory. You can take living in different countries and places into account as well.

135. From the exchange system theory and from this chapter we have learned that the items or goods and services that we exchange are completely different from us. We have learned how to distinguish exchangeable entities. We also know how to distinguish ourselves from the entities that we exchange. Based on our observations, we have been able to separate and analyze all entities that participate in the exchange as well. For our better understanding of those entities, we have been able to define them as well. It is very important to understand that. It is very important to be able to differentiate and distinguish exchangeable entities and parties that are participate in the exchange.

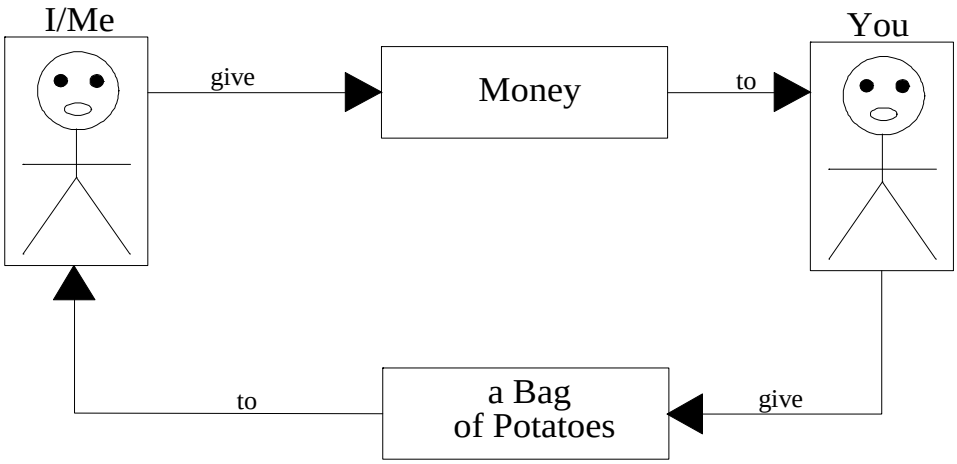
    One important thing we have learned form the exchange system theory related to our physical system, is that our system depends on our utilization theory while we use exchangeable entities in life. In other words, while we use goods and services in life, but we depend on our utilization theory and those goods and services that we exchange cannot ensure our system stability. Only our utilization theory can

maintain our system stability. Another way to look at it, our system depends on our utilization theory, but we use exchangeable entities. It is very important to distinguish and separate exchangeable entices from our utilization theory.

As we said before, one of the most important principles from the exchange system theory is to be able to differentiate and distinguish the exchangeable and non exchangeable entities. To help us understand to differentiate and distinguish the exchangeable entities, we have come up with the following diagram, where we separate items that we exchange. For example, I buy a bag of potatoes can be presented in the following form. In this case, the exchange *I exchange money for a bag of potatoes* is presented on the diagram below. From this diagram, we can see the separation of the bag of potatoes and money and we can see clearly they are separate entities.



Now, let's show the completion of the transaction by a block diagram. The diagram below shows the cyclical approach of the exchange. It shows that I give you money and you give me a bag of potatoes. Again from this block diagram, we can see clearly the exchangeable entities and the parties that are participate in the exchange. We separate everything so we can differentiate and distinguish both the parties and the exchangeable entities.



From the diagram above, let's do some analysis on the exchangeable entities. We know that we exchange money for a bag of potatoes. We know that both money and the bag of potatoes are exchangeable entices. What is important here, since whenever we use the word exchange, buy, sell, trade are cyclical, it is very important to look at the value of each exchange element, which we call exchangeable entities. In this case, we can say what is the relationship of money related to the bag of potatoes? What is the value of the bag of potatoes? To better understand the analysis process, let's do the following, let's represented the exchangeable entities, which are the money and the bag of potatoes by their equivalent below.

$$Money = ?$$

$$BagOfPotatoes = ?$$

From the equations above, we want to determine the value of money that we exchange for the bag of potatoes and the value of the bag of potatoes itself.

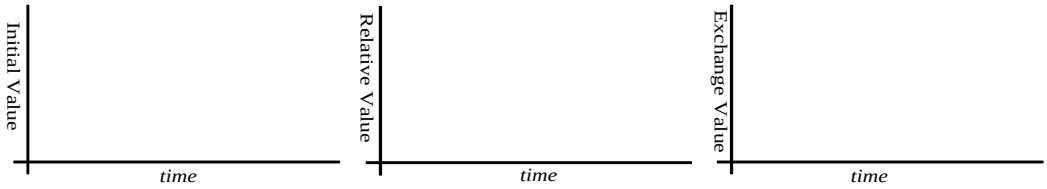
a. Take your time to think about the above explanation
b. From the relationship shown by the equations above, determine the value of money and the value of the bag of potatoes.
c. Conclude with a practical example related to your result from the equation above.
d. Given that we have been able to differentiate and distinguish exchangeable entities, given that we have been able to separate exchangeable and non exchangeable entities, when we see them we think differently about them. The way to look at it, by separating exchangeable and non exchangeable entities, we think completely different when we see exchangeable entities than when we see non exchangeable entities. In this case, from exchangeable entities we may think one way, while from non exchangeable entities we might think completely a different way. By separating exchangeable entities, we know what they are; in this case we may have different way of thinking for each specific entity. Related to the way you have answered part b above, state what do you think when you see the exchangeable entity money, and the bag of potatoes itself. If you think differently for each of them, show any relationship that may lead you to think differently.
e. Since we are mobile and we move from locations to locations. Given that when we move from locations we are still alive and functional, it would have been nice for our exchangeable entities to hold their values at all locations. Given that we live all times, it would have been nice for our exchangeable entities to hold their values related to time as well. Depend how you answer part b above; you should quickly see here money is the exchangeable entity we are talking about. For this part, pick up your country currency or any money you which to use and determine the following.
    - Initial value
    - Exchange value

- Relative value

What we mean by relative value, we mean the retaining value related to time. To do this, you may need to have a table and use any time frame your wish like 50, 100, 150, 200 years, etc. You can also use 500 years if you wish as well. Use this table as a guideline for example. You can use bigger increment, as you get closer to today time, use lesser increment.

Time	Relative Value
1500	Value 1
1550	Value 2
1800	Value 3
1900	Value 4
2000	Value etc

The way to look at it, you should have three plots as shown below. You should have a graph for the initial value, one for the relative value and one for the exchange value.



Provide an explanation for each of the graph above. Show any relationship between them. Define the term *Initial Value* of the entity you have plotted.

f. From your part b above, you have determined the value of the bag of potatoes. Disregard the way you can interpret this value, it does not matter. Here, plot the value of the bag of potatoes you have identified above related to time. You may need to use the same part you have used from the one above. Do a side by side comparison of this graph and the relative value graph above. Show and explain your observation and any comment you may have.

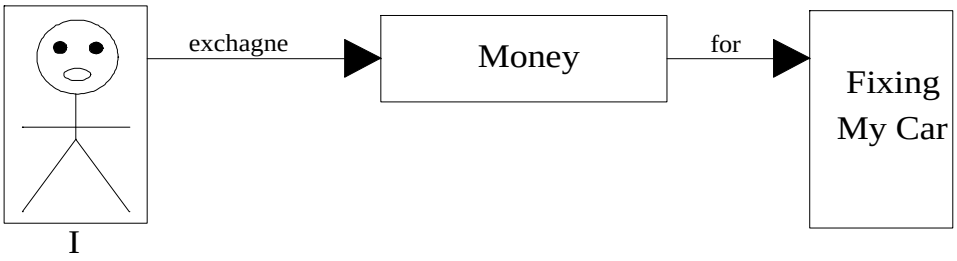
g. From the time chart, we have seen that the characteristic of the physical system remain constant related to time. Disregard at what time we point on the chart; it does not matter if we point to past time or future time, our characteristic remain constant. For instance, we are defined as a theory dependable system. From the past, we have been defined as a theory dependable system and in the future, we are still going to continue defined as a theory dependable system. Since our characteristic does not change related to time, our utilization theory does not change related to time as well. It is very important to understand that. Related to what we have just said about the exchange system theory; based on the graphs above, it looks our data does not behave accordingly. From theory and system relationship, we know that in order for our system to function normally, our utilization theory must be applied. Whenever we talk about functionality of a system related to time, we always have the word stability in mind. So in order for a system to work and

continue to work normally, it must be stable related to time. That means, as time goes, that system must continue to work normally. From our observation, it seems like the behavior of our data is not normal related to stability.

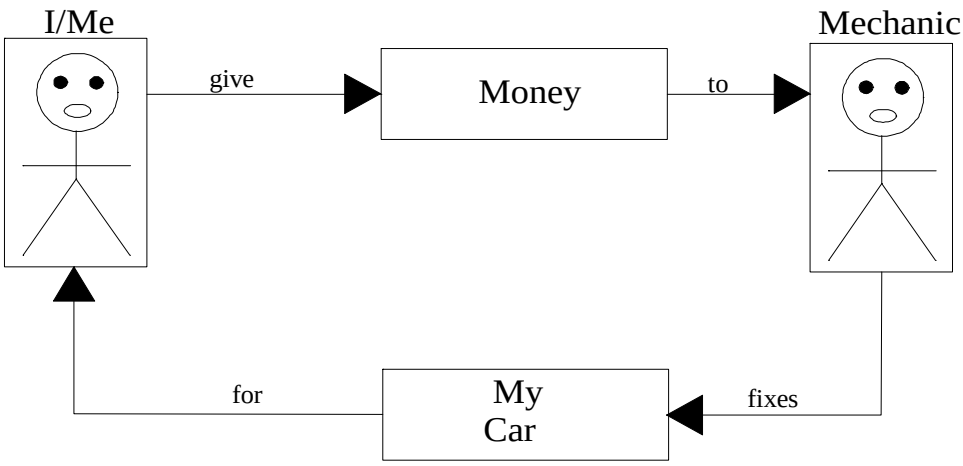
h. Take your time to think about the above paragraph and use it as a guideline to show any instability you have observed from your data or your graph related to our functional system based on misunderstanding or misapplying our utilization theory. You can also provide a practical example in your answer here.

i. Resources that we need to live do not locate in one place, they locate in various places. Previously, we have shown the plot of relative and exchange values of money. We have also plotted the value of the bag of potatoes related to time. Here, you need to plot resources related to time. Assume resources in the potatoes domain. Now, compare you plot to the relative value of money and provide some explanations. Think this as only an approximation.

136. From the above exercise, we have learned how to separate and distinguish exchangeable entities. From the above exercise, we have also thought differently when we see exchangeable entities. For example, even when we use money to buy a bag of potatoes, when we see money we think differently than when we see a bag of potatoes. That makes a lot of senses, since they are completely different and separate entities. Since we exchange money for goods and services, in this example, we are going to take a look of services related to money that we exchange. Below, the diagram shows that I exchange money for fixing my car.



Since exchange is cyclical, we can also say that we give money to the mechanic and the mechanic fixes the car for us. In this case, we have the diagram below that shows the cyclical.

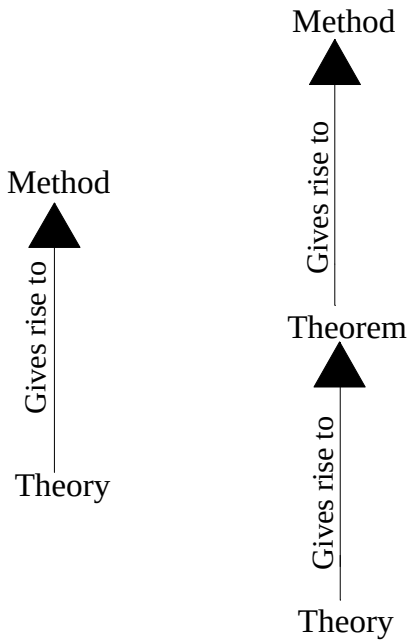


a. From the explanation above, determine the value of the fixing of the car as shown by the equation below.

$$FixingMyCar = ?$$

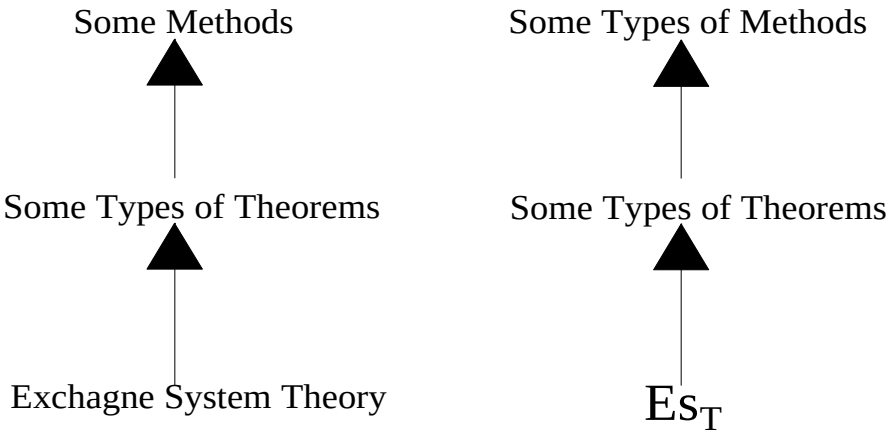
b. Depend how you answer the above part, when you see your car being fixed, you might think differently than when you see the money. If so, provide any explanation that may lead you to think differently.

137. We have learned the following relationship between theory, theorem, and method. We know that theorems are derived from theories, while methods are derived from theorems. Another way to look at it, we can say that a theory is a set of theorems, while a theorem is a set of methods. We may have already seen the diagram bellow which shows the relationship between theory, theorem, and methods.



Since we say theorems are derived from theory and methods are derived from theorem, we can also say that theory gives rise to theorems, while theorem gives rise to methods. As shown by the diagram above, with that relationship, we can also say that theory gives rise to methods.

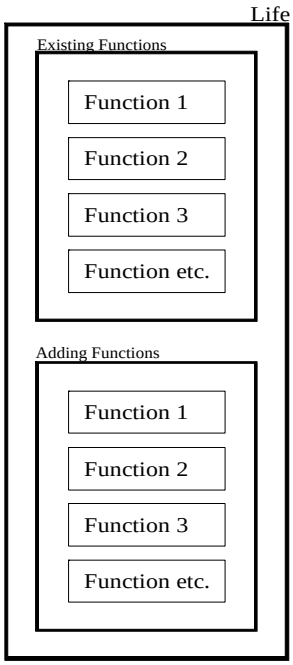
Related to the exchange system theory, we can say that the exchange system theory gives rise to some set of principles or theorems, while those theorems give rise to methods. Since methods are functions themselves, we can also say that those theorems give rise to methods. With that, we have the following relationship described by the following diagram.

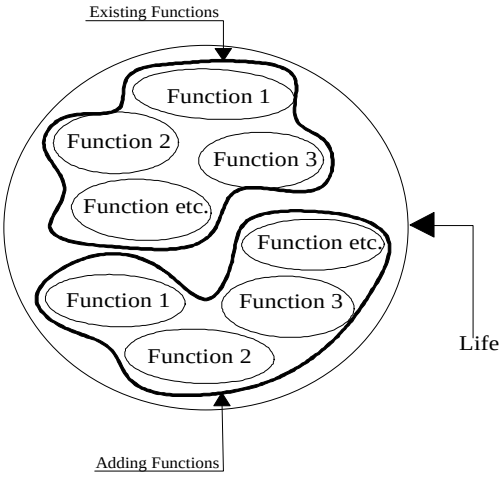


The way to look at it, the exchange system theory gives rise to some type of theorems, while those theorems gives rise to some types of methods. Since we

already know that methods are functions themselves, we can say that the exchange system theory gives rise to some types of theorems, while those theorems give rise to some type of methods. With that relationship, we can conclude that the exchange system theory gives rise to some types of functions.

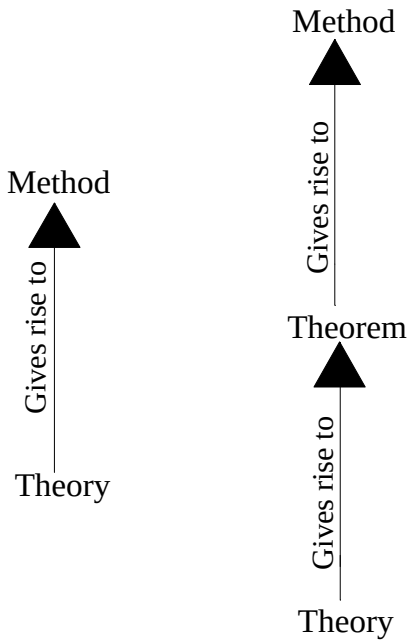
From the definition of life, we know that life is made of two set of functions. These two set of functions are, existing functions and adding functions. To refresh our understanding of life, let's represent life by the diagrams below. Both diagrams show the representation of life. One is shown life is represented by a set of functions in a rectangle, while the other shows that in a circle.





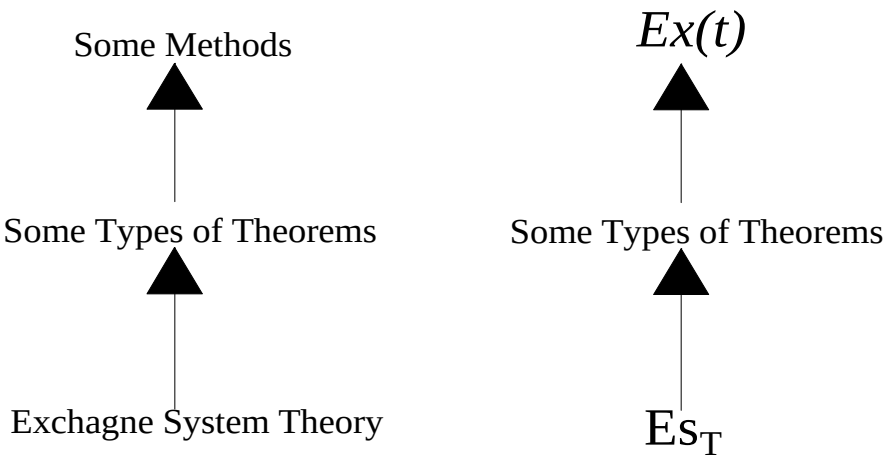
a. Take your time to think about the above explanation
b. Based on your understanding, determine whether the functions that are derived from the exchange system theory are considered to be existing or adding functions. The way to look at it, determine whether those set of functions are included in the existing set of functions of life or in the adding set of functions of life.

137′. We have learned the following relationship between theory, theorem, and method. We know that theorems are derived from theories, while methods are derived from theorems. Another way to look at it, we can say that a theory is a set of theorems, while a theorem is a set of methods. We may have already seen the diagram bellow which shows the relationship between theory, theorem, and method.



Since we say theorems are derived from theory and methods are derived from theorem, we can also say that theory gives rise to theorem, while theorem gives rise to method. As shown by the diagram above, with that relationship, we can also say that theory gives rise to method.

Related to the exchange system theory, we can say that the exchange system theory gives rise to some set of principles or theorems, while those theorems give rise to methods. Since methods are functions themselves, we can also say that those theorems give rise to methods. With that, we have the following relationship described by the following diagram.



The way to look at it, the exchange system theory gives rise to some type of theorems, while those theorems gives rise to some types of methods. From what is shown by the figure above, we let $Ex(t)$ be the function that are derived from the theorems Es_T gives rise to. Since we know that methods are functions themselves, we use function's name $Ex(t)$ instead.

From the life equation, we know life is made of two set of functions which is provided by the equation below and described on the table.

$$\mathcal{L}(t)=h(t)+u(t)$$

Life of Time	Existing Functions of Time	Adding Functions of Time
$\mathcal{L}(t)$	$h(t)$	$u(t)$

Where $h(t)$ and $u(t)$ are defined by those equations.

$$h(t)=\sum_{n=1}^{\infty} h_n(t)$$

$$u(t)=\sum_{m=1}^{M} u_m(t)$$

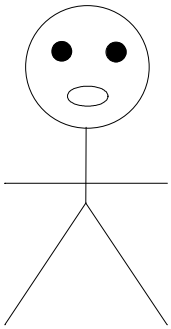
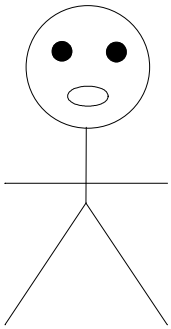
a. Think about the above explanation
c. Determine whether $Ex(t)$ is a function of $h(t)$ or $u(t)$ and state why. The way to look at it, determine and explain if the methods mentioned here derived from the exchange system theory is belong to the group of existing functions or the group of adding functions.

138. Verify that existing functions are not exchangeable. You may provide a practical example in your workout and show your observation as well.

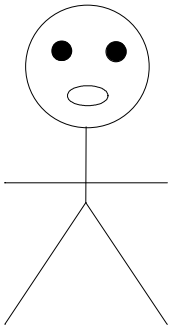
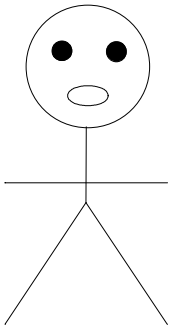
138′. Using algebra to verify that existing functions are not exchangeable. You may provide a practical example in your workout and sow your observation as well.

139. **Understanding Passive Theory:** We define a passive theory as a neutral theory, since it does not affect the system before or after usage. For instance, the gaming theory is considered to be passive, since the physical system remains unchanged before and after usage; see the table below. Contrary to the passive theory, we can call our utilization theory, active theory, since its utilization enables both the physical and the functional systems to remain active or functional. You may not agree; however it is strongly believed that the gaming theory is passive. Describe

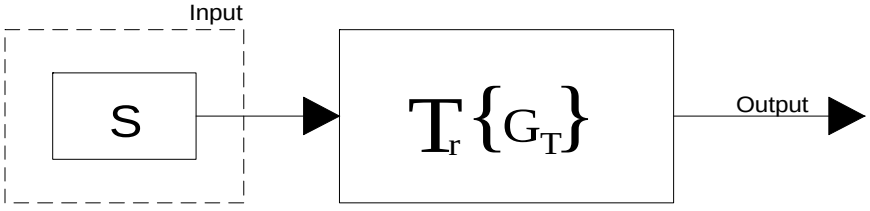
whether or not the gaming theory is passive. What do we mean by game, for instance football, soccer, basketball etc?

Person	Person
Before Game 	After Game 
Status Normal	Status Normal

139′. **Understanding Passive Theory:** In order for a theory to be passive, if it is used by a system or used in a system, there should be no effect in that system or by that system at all. That means, after usage, the system should remain the same. For example, the Gaming Theory (G_T) is considered to be a passive theory. See the table below for more information.

Person	Person
Before Game 	After Game 
Status Normal	Status Normal

The way to look at it, a passive theory must be a neutral theory; that means it does not produce any effect at all by that system or in that system.



In order for the theory depicted above to be passive, the operation of the right side must be equal to unity as shown by this equation. The output should give a result of the same system without any effect.

$$T_r\{G_T\}=1$$

a. Think about the above explanations
b. Show whether or not the gaming theory is passive. It is strongly believed that G_T is passive; you might disagree or agree; if you don't agree show it; also if you disagree show it. When we talk about the gaming theory, we mean that for example soccer is a game and all other games like basketball, football etc. All that you are asked to do is to show that G_T is passive to the system above. From the equation above, 1 is referring as unity.

140. **The Purpose of a Given Theory:** From theory and system relationship, we have learned that a theory is associated to a system in order to be used to ensure that system functionality. Related to us and our parent's principles, we can say that our parents give us principles, so that we can apply in order to ensure our functionality. That makes a lot of senses, since the documentation of a system is considered to be that system functional theory, nobody knows more about that system than its documentation. So the purpose of that documentation or that theory is to enable the functionality of the associated system. Related to our utilization theory, there is no difference. Nobody knows more about our functionality than our parent's principles. Nobody knows more about life than our parent's principles. Thus, our parent's principles are the only one that can ensure our functionality. Given that we are a theory dependable system, we do things based on our ideas. Theory gives us ideas on how to do things. Without theory, we are in the dark; we don't know how to do things. Without theory, we would not have any idea on how to do things.

With our knowledge of understanding our utilization theory, we have been able to group them and identify them to enable us to use them more efficiently. By grouping our parent's principles, we come with some of them listed on the table below with their names and their abbreviation.

Theory Name	Abbreviation
Communication Theory	K_T
Instrumentation Theory	I_T
Information Theory	i_T
Theory of Marketing	M_T
Exchange System Theory	Es_T
The Gaming Theory	G_T

a. Take your time to think about the above explanation
b. For each theory listed from the table above, show their purposes or the purpose of their applications. In other words, show the reason or the purpose of each given theory above. Provide a practical application for each. You can also provide a misapplication example for each as well.

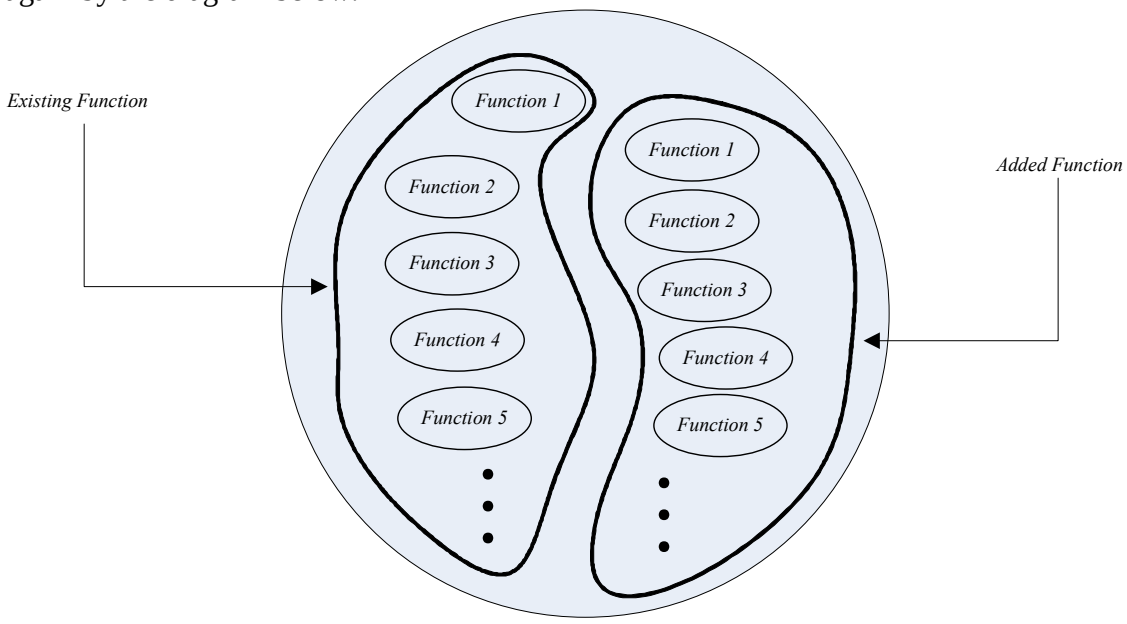
141. Show your understanding of the theory of marketing related to portability of theory. This is the same as saying that show your understanding of portability of theory related to the theory of marketing.

141′. Use algebra to show your understanding of the theory of marketing related to portability of theory. This is the same as saying that show your understanding of portability of theory related to the theory of marketing by using algebra.

142. Show your understanding of the exchange system theory related to portability of theory. This is the same as saying that show your understanding of portability of theory related to the exchange system theory.

143. Show your understanding of the physical system self controllable characteristic related to the exchange system theory. This is the same as saying, show your understanding of the exchange system theory related to the physical system self controllable constant characteristic.

144. From the visual representation of life, we have already answered the following question. If the existing functions become dysfunction, then life becomes dysfunctional. In term of both added and existing functions, let's represent life again by the diagram below.



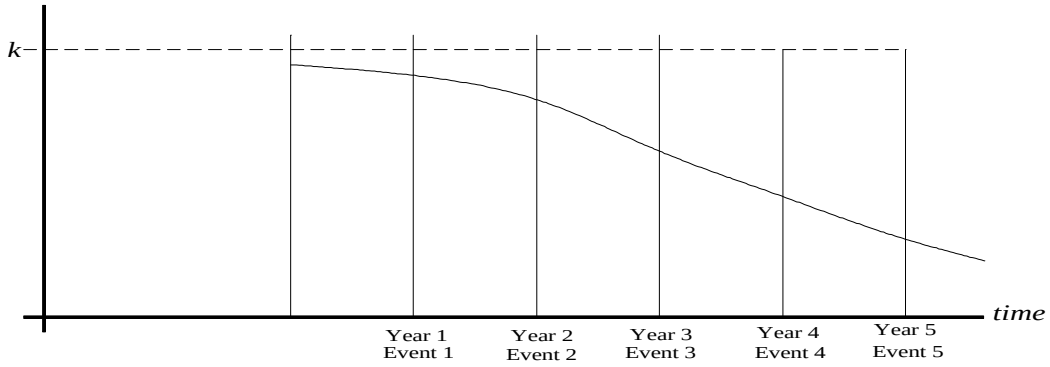
Life

By observation and by our understanding of life, we can see that the existing functions may not become dysfunctional abruptly, but related to time, they can undergo a declining process where they can become dysfunctional.

a. From your observation and from your understanding of life, what type of function you think life is?
b. Depend on how your answer the question above, you can see that the declining process of life can be attributed to events related to time. The way to look at it, since each function weight on life, any event that is related to the declining of a specific function is weighted to life as well. With that, if we would like to plot life related to other functions that include in life by plotting each function separately, any declining we observe in one can attributed to the declining of life as well. To better understand the process of declining life related to time, it makes sense for us to go back in time and look at some events that had attributed to the declining of life. It does not matter how much time we use, we can use 100 years or more, we can also use less than 100 years. In this case, we can plot life and show the declining related to time for each particular event. Plot the declining of life related to events or some events in history. Use 100 years or more; you can also use less than 100 years if you want to. The way to look at it, make a table as shown below. In that table, tabulate the years and event and give them a value. For instance the most significant event is going to have more value. You can sum the value to give you like 70% or 80% decline. That number does not matter, what matters is for you to show the drop related to events in history. Depend what time you use, you can say that life was not declining before that time. You can have a plot similar to the one below for instance.

   You can have two plots, one smooth and one non smooth to show the sharp drop. Rather than using history, you can also approach this exercise by using some functions that include in existing functions and look their declining related to time. You can give them a value and tabulated them for each declining or major declining and plot life as the result.

Year	Events	Value
Year 1	Event 1	2%
Year 2	Event 2	1%
Year 3	Event 3	3%
Year 4	Event 4	1.5%
Year 5	Event 5	5%



144′. From the life equation exercise, you may have already answered this question; show that

$$\mathcal{L}(t)=0\text{, if } h(t)=0$$

$\mathcal{L}(t)$ was given by the following equations

$$\mathcal{L}(t)=h(t)+u(t)$$

$$h(t)=\sum_{n=1}^{\infty}h_n(t) \text{ and } u(t)=\sum_{m=1}^{M}u_m(t)$$

$$\mathcal{L}(t)=h_1(t)+h_2(t)+h_3(t)+\cdots+u_1(t)+u_2(t)+u_3(t)+\cdots$$

By observation and by inspection we can see that $h(t)$ may not abruptly goes to 0, but may undergo a declining process related to time that can approach 0.

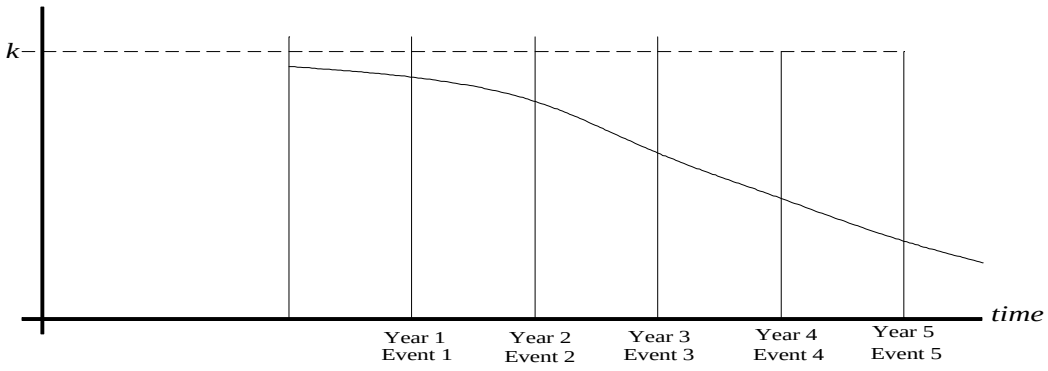
a. From your observation, what type of function is $\mathcal{L}(t)$. Simply name the type of function you think $\mathcal{L}(t)$ is.

b. Depend on how your answer the question above, you can see that the declining process of $\mathcal{L}(t)$ can be attributed to events related to time. The way to look at it, since each function weights on $\mathcal{L}(t)$, any event that is related to the declining of a specific function is also weighted on $\mathcal{L}(t)$ as well. With that, if we would like to plot $\mathcal{L}(t)$ related to other functions that include in $\mathcal{L}(t)$ by plotting each function separately, any declining we

observe in one can attribute to the declining of $\mathcal{L}(t)$ as well. To better understand the process of declining $\mathcal{L}(t)$ related to time, it makes sense for us to go back in time and look at some events that had attributed to the declining of $\mathcal{L}(t)$. It does not matter how much time we use, we can use 100 years or more, we can also use less than 100 years. In this case, we can plot $\mathcal{L}(t)$ and show the declining related to time for each particular event. Plot the declining of $\mathcal{L}(t)$ related to events or some events in history. Use 100 years or more; you can also use less than 100 years if you want to. The way to look at it, make a table as shown below. In that table, tabulate the years and event and give them a value. For instance the most significant event is going to have more value. You can sum the value to give you like 70% or 80% decline. That number does not matter, what matters is for you to show the drop related to events in history. Depend what time you use, you can say that $\mathcal{L}(t)$ was not declining before that time. You can have a plot similar to the one below for instance.

You can have two plots, one smooth and one non smooth to show the sharp drop. Rather than using history, you can also approach this exercise by using some functions that include in $h(t)$ and look their declining related to time. You can give them a value and tabulated them for each declining or major declining and plot $\mathcal{L}(t)$ as the result.

Year	Events	Value
Year 1	Event 1	2%
Year 2	Event 2	1%
Year 3	Event 3	3%
Year 4	Event 4	1.5%
Year 5	Event 5	5%



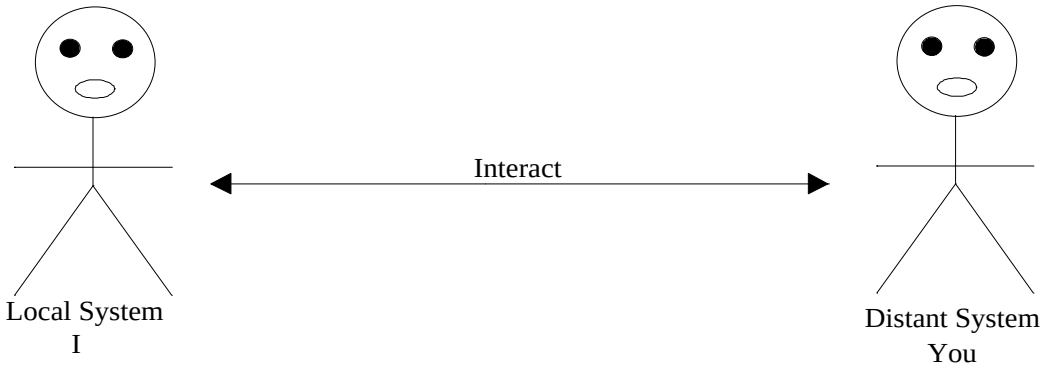
145. We have learned about characteristics of words, by now we should have a very good understanding of words' characteristics. From our understanding, it seems like not all words have characteristics. That may well be true, but sometime it is always better for each of us to figure that out.
    a. Take your time to think about the above paragraph
    b. For the exchange entity money, state whether or not it does have a characteristic. If it does, state the characteristic and verify your answer. If it does not, justify your answer as well.

146. Show your understanding of the gaming theory related to the theory of marketing. This is the same as saying, show your understanding of the theory of marketing related to the gaming theory.

147. **Understanding our Utilization Theory:** The understanding of the word theory itself had helped us identify and group our parent's principles. By grouping and naming our parent's principles, we have been able to identify them easily and work with them more efficiently. By now, we should have had a very good understanding of our utilization theory. By grouping and identifying our parent principles to form our utilization theory, we have come up with 10 set of principles. We have identified them, named them, and abbreviated them to help us work with them more efficiently and to make it easier for us to recognize them. The table below shows the grouping of our parent's principles which forms our utilization theory with their names and their abbreviations. Don't worry about the order of our theory; it can be in any order. All we need to worry about is the names, the abbreviations and the quantities. After all, that may not even be important at all, what is the most important for us is to learn and apply our utilization theory.

Order	Theory Name	Abbreviation
1	The Communication Theory	K_T
2	The Information Theory	i_T
3	The Instrumentation Theory	I_T
4	The Power Theorem	P_T
5	The Theory of Education	E_T
6	The Theory of Marketing	M_T
7	The Exchange System Theory	Es_T
8	The Gaming Theory	G_T
9	The Work Theory	W_T
10	The Theory of Reproduction	X_T

We are defined as an associative system. There is no way one can live without the need of another. We interface together to do what we do. In terms of our utilization theory, it seems like every time we interact with each other, there is a set of principles that is needed for that interaction. In other words, every time we interact to each other, there is a set of principle that is needed to manage that interaction. That makes a lot of senses, and it is very important to know. The diagram below shows exactly what we have just said here. Every time the local system interacts with the distant system, there is a set of principles that is needed for that interaction. The way to look at it, every time I interact with you, there is a theory that is needed for that interaction. The diagram below shows the interaction between the local system and the distant system.



To better understand what we have said above, let's say it again. Given that we are an associative system, related to our utilization theory, it seems like every time we interact to each other to do something, there are some set of principles that are needed to control that interaction. To enhance our understanding, let's take a look of this table to see what we are talking about.

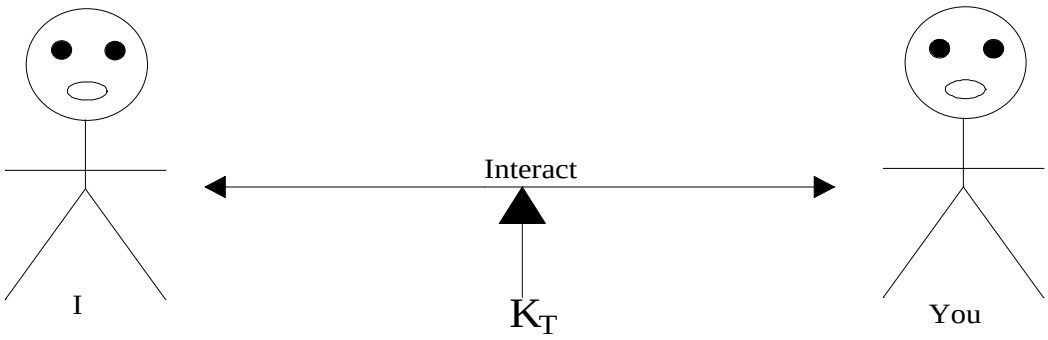
Interaction From One to Another	Theory
We interact to communicate with each other	K_T
We interact to inform each other	i_T
We interact to use our instruments for each other	I_T
We interact to market to each other	M_T
We interact to exchange with each other	Es_T
We interact to play with each other	G_T
We interact to work with each other	W_T

Given that that a lot of problems are caused due to the fact that we don't know how to interact to each other, it makes sense for us to follow some set of

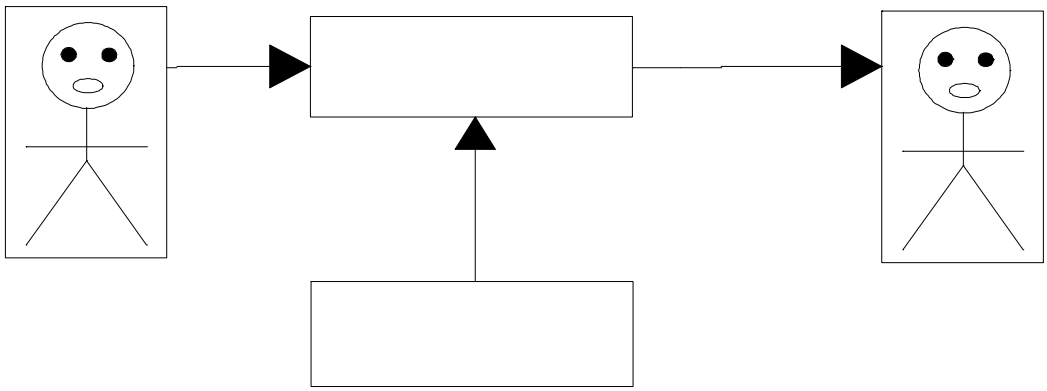
principles to interact with each other. Take your time to think about the overall explanation to see if it makes sense to you.

148. From the exercise above, we have learned more about our utilization theory. Not only we have identified all of them, but we have also learned that they are needed whenever we interact to each other. It is very important to understand that, since we live in an associative system and our lives depend on each other, we must learn how to interact with each other based on our utilization theory.
    a. Use the table below as a guideline to draw the circular interface from you to another person. Use "I" for you and "you" for the other person. Put yourself in the middle and the other persons around you. In the interaction link, put the theory you have identified that controls that interaction. See the diagram below on how the theory controls the interaction. You should have two diagrams and two tables; do the tables first before each diagram; one table for all type of applications which we can call generic, then the other table for specific application.

Interaction From One to Another	Theory
We interact to communicate with each other	K_T
We interact to inform each other	i_T
We interact to use our instruments for each other	I_T
We interact to market to each other	M_T
We interact to exchange with each other	Es_T
We interact to play with each other	G_T
We interact to work with each other	W_T



    b. For this one, use the 7 theories shown on the table above. Draw a diagram for each of them and put the proper word in the box. Use "I" for you and "You" for the other person. You should have a total of 14 diagrams, two set of 7. One set for all type of applications, and one for specific application.



c. Provide an explanation for each case you have drawn for part b above.
d. From the exercise above, we have said that we develop a lot of problems since we don't know how to interact with each other. Since interaction with each other requires the usage of our utilization theory, whenever we disregard them when we interact with each other, we simply develop problems. Verity this statement; identify couple of problems or couple of cases that have been caused by interacting with each other. In other words, identify couple of problems development cases that have been caused by disregarding the principles that we use when we interact to each other. The way to do that, tabulate the 7 theories above, and provide couple of problems examples for each case. You can name multiple problems for one case.
e. We know that problems are developed when our utilization theory is not applied, but solvable when we apply our utilization theory. Based on the result above, we see that problems happen during the interaction when we don't apply our utilization theory. Since any problem that happened during the interaction, happened because we did not apply our utilization theory, those problems are only solvable when we apply our utilization theory. It is very important to understand that. From the part d above, show that those problems could have been avoided if our utilization theory was applied to guide us when we interface to each other. Another way to look at it, is to have the table above with the problems and one column with the solution and provide possible solution for each and show that they could have been avoided.
f. By working out all the steps above, we have shown the importance of our utilization theory. Since we develop a lot of problems when we interact with each other without the usage of our theory, since a lot of problems can be developed without the usage of our utilization theory when we interact toe each other, we can clearly see that our utilization theory is very important to us, since it enables us to interact to each other without problem. If you haven't done so, use the theory listed in the table below and show what would have happened without the existence of our theory. In other words, by using out 10 theories, you can show that what can

happen or what could have happened if those theories did not exist. You can take it like this, without the existence of specific theory, that problem can be developed; without the application of the specific theory, that problem could have been developed; without the existence or the application of specific theory, problem is developed. In this case you can conclude in your work out that our utilization theory or specific theory is very important to us, since it prevent us from developing problems. It makes sense for them to exist; it also makes sense for us to apply them. You may exclude theory of education in your workout.

Order	Theory Name	Abbreviation
1	The Communication Theory	K_T
2	The Information Theory	i_T
3	The Instrumentation Theory	I_T
4	The Power Theorem	P_T
5	The Theory of Education	E_T
6	The Theory of Marketing	M_T
7	The Exchange System Theory	Es_T
8	The Gaming Theory	G_T
9	The Work Theory	W_T
10	The Theory of Reproduction	X_T

d. For the 7 theories listed in part a, each theory can be verify by asking specific question relates to the physical system. For instance, to verify theory of communication, we can ask question like, *do I communicate?* The answer is *yes*, then that theory is verified related to the system it is attached to. The way to look at it, in order for a theory to be verified, the system it is related to must be able to respond to it. In other words, the theory is verified by that system, since they are related to each other. Use the same pattern to verify the remaining six theories.

149. We know that problems are not physically defined. We define a problem as a negative philosophy that enables life to function abnormal. The way to look at it, the application of negative philosophies develops problems. Those can only be solved by dropping those philosophies and learn and apply our parent's principles. The fact that we are a theory dependable system, our intelligence always depend on theory and it needs theory to get ideas on how to do things. When we disregard our utilization theory, our intelligence simply depends on our philosophies. Since our philosophies are not related to our system, when we depend on them, we simply develop problems. To solve those problems, we must always learn and apply our utilization theory. Our utilization theory

includes the work theory and the reproduction theory. Whenever we disregard or misapply those two set of principles, we simply develop problems in life.

a. Take your time to think about the above paragraph
b. State or list couples of problems that are caused by misapplying or misunderstanding of the work theory.
c. From your understanding of the work theory, shows that those problems could have been avoided if the work theory was understood and applied.
d. Think about couple of problems that are caused by the misunderstanding of the reproduction theory.
e. From your understanding of the reproduction theory, think if those problems could have been avoided if the reproduction theory was understood. Think about this part only as your workout without working it out on paper.

150. Show your understanding of the physical system self controllable characteristic related to the theory of marketing. This is the same as saying that show your understanding of the theory of marketing related to the self controllable characteristic of the physical system.

151. Show your understanding of independency of theory related to the theory of marketing. This is the same as saying that show your understanding of the theory of marketing related to independency of theory.

Note

This is an update of the exercise number 63 and 63′, just workout the additional theory that you did not workout previously. You don't have to workout the overall exercise, just workout the part that is applied to you.

152. Our utilization theory was given to us by the previous table. In term of the application of our utilization theory, we know that the application of our utilization theory enables the functionality of life. In other words, when we apply our utilization theory, it results to functions of life. The diagram below provides more explanation on what we have just said.

Now let's represent couple of theories that make up our utilization theory on the table below. Where the application of those theories result to function of life. The last column on the table shows the function name result by the application of those theories.

Given Theory	Abbreviation	Result Function
The Communication Theory	K_T	
The Information Theory	I_T	
The Instrumentation Theory	i_T	
The Education Theorem	E_T	
The Gaming Theory	G_T	
The Work Theory	W_T	
The Theory of Marketing	M_T	
The Exchange System theory Theory	Es_T	

By understanding the overall explanation, all you need to do, fill the result function column above by providing a practical example for each theory application. In other words, the application of each theory results to function of life. In this case, you are going to provide a practical application of the resulting function. You can also show the application by a diagram similar to the one above, if you want to.

152′. We know the transform of the system equation produces the life equation. As shown by the equation below and the system utilization theory is given by the second equation.

$$T_r\{U_T\} = \mathcal{L}(t)$$

$$U_T = \{K_T + i_T + I_T + P_T + E_T + M_T + Es_T + G_T + W_T + X_T\}$$

Now, let's make the following table from the above equation. The result to the right shows the transform for each term; don't worry about the order of existing and added function and also the length of the equation.

Given Theory	Transform of Given Theory	Result
K_T	$T_r\{K_T\}$	$h_1(t)+u_1(t)$
I_T	$T_r\{I_T\}$	$h_2(t)+u_2(t)$
i_T	$T_r\{i_T\}$	$h_3(t)+u_3(t)$
E_T	$T_r\{E_T\}$	$h_4(t)+u_4(t)$
G_T	$T_r\{G_T\}$	$h_5(t)+u_5(t)$
W_T	$T_r\{W_T\}$	$h_6(t)+u_6(t)$

M_T	$T_r\{M_T\}$	$h_7(t)+u_7(t)$
Es_T	$T_r\{Es_T\}$	$h_8(t)+u_8(t)$

Now, we can rewrite the life equation in the form of what shows below by simply rewrite the terms from the table above.

$$T_r\{U_T\}=h_1(t)+u_1(t)+h_2(t)+u_2(t)+h_3(t)+u_3(t)+h_4(t)+u_4(t)$$

By rearranging the terms and use the summation notation, we have

$$T_r\{U_T\}=\left(\sum_{n=1}^{4}h_n(t)\right)+\left(\sum_{m=1}^{4}u_m(t)\right) \Leftrightarrow \mathcal{L}(t)=\left(\sum_{n=1}^{4}h_n(t)\right)+\left(\sum_{m=1}^{4}u_m(t)\right)$$

All what you need to do, for each transformation theory listed in the table above relatively to its result, show the practical application of life. For instance you can provide an example to show the application of that theory related to life; whether it applies or not or should be applied.

153. Show your understanding of the physical system associativity characteristic related to the theory of marketing. This is the same as saying show your understanding of the theory of marketing related to the associativity characteristic of the physical system.

154. Show your understanding of independency of theory related to the exchange system theory. This is the same as saying that show your understanding of the exchange system theory related to independency of theory.

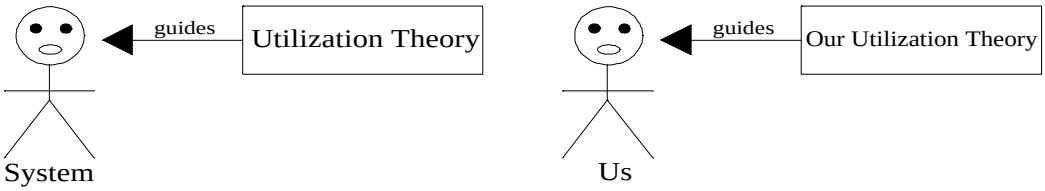
155. This exercise can be substituted for the one above depends how you work it out, show your understanding of the physical system theory dependability characteristic related to the exchange system theory. This is the same as saying that, show your understanding of the exchange system theory related to the physical system theory dependable constant characteristic.

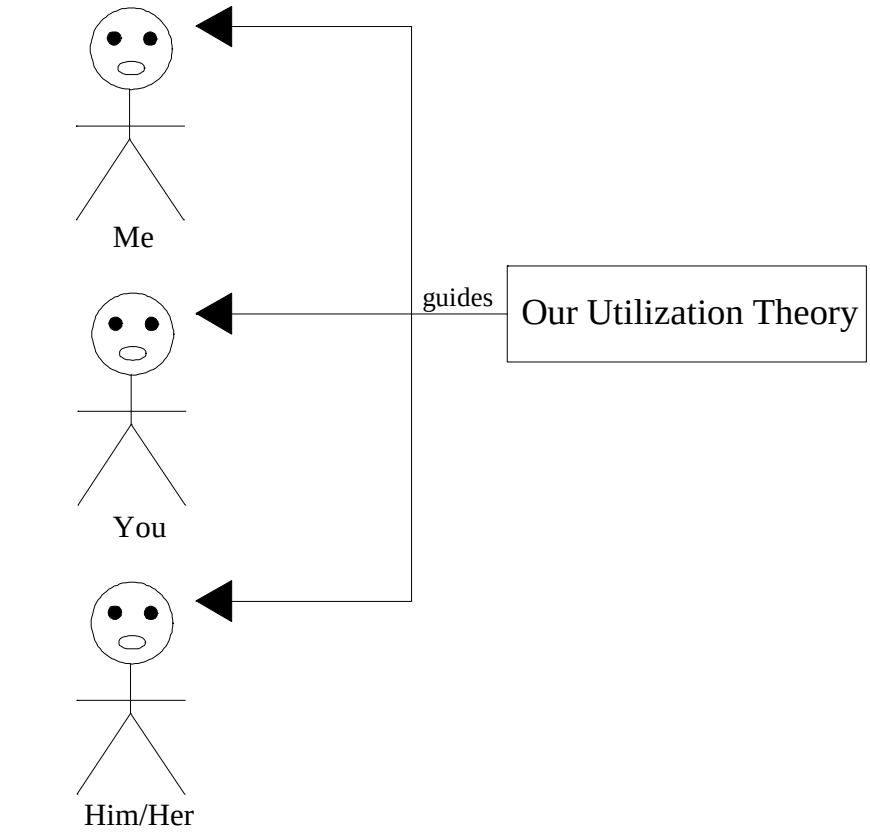
156. Show your understanding of the physical system associativity constant characteristic related to the exchange system theory. This is the same as saying show your understanding of the exchange system theory related to the physical system associativity characteristic.

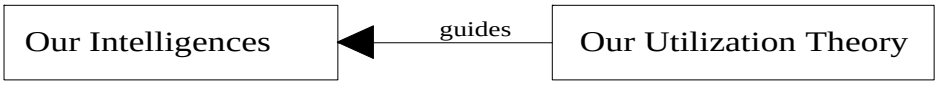
157. **Understanding our Utilization Theory Related to Us:** We know that our utilization theory contains 10 set of principles, which we call 10 theories. We know that a theory contains the set of principles that enable a system to function normally. Our utilization theory contains the set of principles that enables the functionality of our lives. A theory contains set of principles that gives us ideas

on how to do things. Our utilization theory contains the set of principles that gives us ideas on how to do things. Given that life is a system, and a system must function according to its utilization theory, our utilization theory contains set of principles that tell us how life works. We live by doing things; our utilization theory gives us ideas on how to do things.

Given that we are a theory guided system, we have an intelligence that works with theory to give it ideas on how to do things. We already know that the functional system—life—is a collection of functions. We live by executing functions. Since those functions are methods that are derived from theories, without our utilization theory that tell us how life works, there is no way we can execute methods properly or derive proper methods in life. The diagram below shows the representation of our utilization theory related to us. The first one shows that we are a theory guided system, and we depend on our utilization theory. The second one shows that all of us depend on the same theory. Since we are an intelligent-system and intelligence needs theory to function, the third one shows the dependence of our intelligence from our utilization theory. Take your time to think about the diagrams and the explanations.







Note:
The items below are an addition to what you have already learned from your manager/~~supervisor~~ or perhaps your instructor about the work theory.

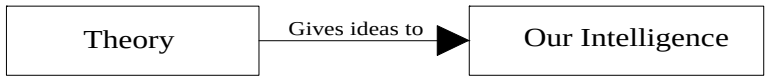
158. **An Introduction to the Work Theory:** By now, we should have a very good understanding of life. We use the word life interchangeable with the term functional system. While both of them are the same, but sometime it is always good to refer to life as the functional system. Whenever we use the term functional system, what comes to our mind is that life is made of many, many functions. So, whenever we mention life, what we see are a lot of functions that are being executed. Those functions are existing functions and adding functions. In terms of adding functions, whenever we use that term it always good to think that those are useful functions that we add to life. We can also say that the adding functions are functions that come after existing functions.

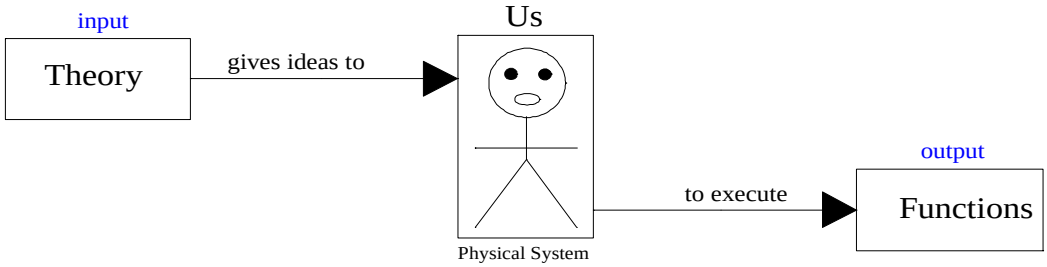
Since all systems obey some rules of operation, whenever we talk about life, we should never forget our utilization theory. That makes sense, since our utilization theory is the set of principles that enables the functionality of life. From what we

know about the relationship of life, ourselves and our utilization theory, we know that as a theory dependable system, we have the ability to apply our utilization theory to enable the functional system to remain active. With that, we can clearly see that we apply our utilization theory to enable ourselves to remain active. In other words, we can also say that the application of our utilization theory enables us to maintain our activities.

When we work, we simply execute functions of life. Quickly, we can define work as execution of functions of life. That makes a lot of senses, and it is well matched with the relationship of us, the functional system, and our utilization theory. While we get knowledge from our utilization theory by applying it to execute functions of life, the executions of those functions enable us to remain active. In other words, while our utilization theory enables us to execute functions of life, the execution of those functions enables the functional system to remain active. Lastly, we can say that work is the process of applying theory to execute functions of life. The terms execute functions means both derive and execute.

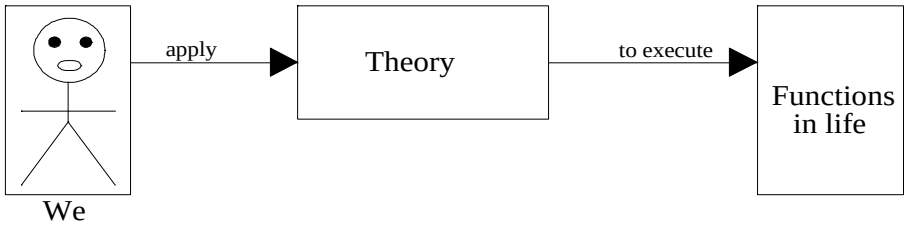
159. **Understanding the Work Theory:** We the physical system is defined as a theory dependable system. As a theory dependable system we have an intelligence that enables us to apply theory to derive and execute functions of life. To better understand our system related to our intelligence and our utilization theory, it is always good represent them by a block diagram. The diagram below shows that theory gives ideas to our intelligence. We can also say that theory gives ideas to our intelligence to enable us to execute functions. The second diagram shows that we get ideas from theory to enable us to execute functions.

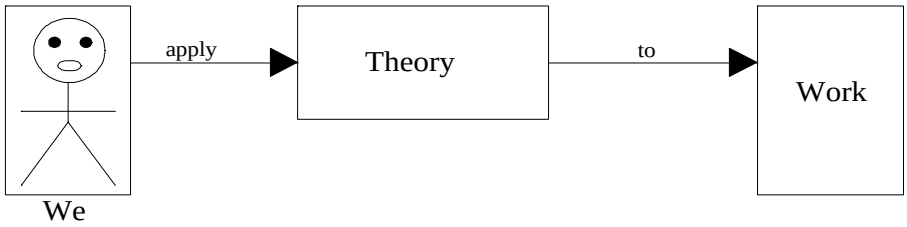




From the diagram above, we can see that as a self controllable system, we depend on theory to gives us ideas to enable us to execute functions of life. It is always good to understand that the functions that we execute in life are related to the ideas that we get from theory. Given that work is the process of executing functions of life, the ideas that we get from theory enable us to work. While the

diagram above shows that we get ideas from theory to execute functions, it is always good to represent a related block diagram that shows the application of the theory. The diagram below is similar to the one above. It shows that we apply theory to execute functions in life. Since work is the process of executing functions in life, we can simply replace the phrase "Functions in life" by "Work". This is basically what the second diagram shows. It shows that we apply theory to work. That makes a lot of senses, since we are a self controllable system, as a self controllable system, we rely on theory to give us ideas to execute functions of life. This is what the diagram shows. It shows that we apply ideas that we get from theory to work.



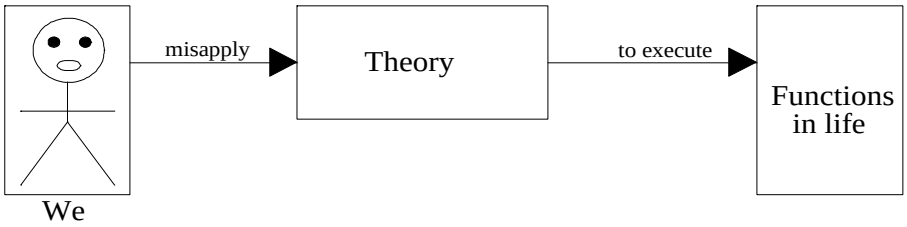


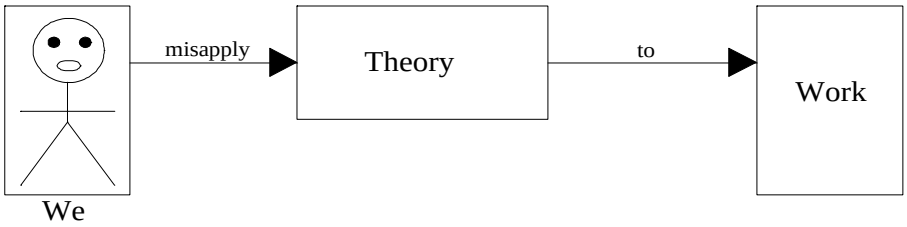
From the diagram above, it shows that when we work, we simply execute functions of life and when we execute functions of life, we also work. It is very important to understand that relationship.

We know that the physical system is defined as theory dependable and self controllable; the term theory dependable maps together with self controllable. We know that we are an associative system. As an associative system, our lives depend on each other. There is no way one person can live without the need of others. When it comes to theory application, it is always good to understand the terms self controllable, theory dependable, and associativity. We know that we apply our utilization theory to enable us to execute functions of life. While we depend on each other to live, however we cannot apply theory for each other. It is very important to understand that and we have already learned that before. The way to look at it, while we work together to execute functions of life, however each of us apply theory independently to execute those functions. As a theory dependable system, it is very important to understand that.

Theories are useful to us since they give us ideas to execute functions in life. While theories are useful, they also develop problems when they are misused or disregarded. We know that problems are defined as misapplication of theories or application of negative philosophies. In other words, we create problems when

we disregard our utilization theory and apply our negative philosophies. Given that the functions that we execute in life rely on our ideas, whenever those ideas are not good the functions that we execute will not execute properly. The results of those executions will develop problems in life. It is very important to understand problems development from negative philosophies related to functions executions in life. The diagrams below show what happen when we misapply or disregard theory to execute functions in life. The first diagram shows that we develop problems in life when we misapply theory, while the second one shows that whenever we misapply or disregard theory to work, we simply develop problems.



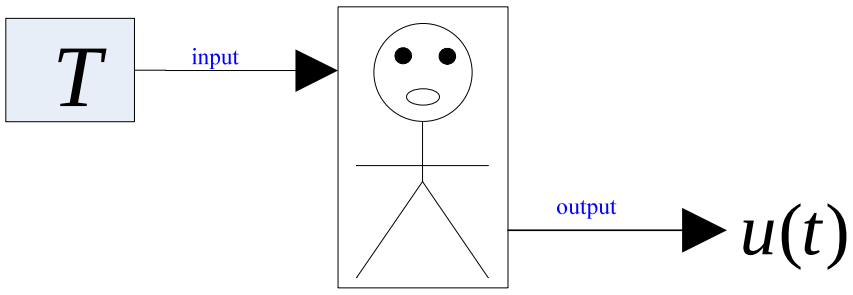


Since life is related to our utilization theory, in order to solve and prevent problems in life, the functions that we execute in life must be related to our utilization theory. The way to look at it, it is always good to apply our utilization theory to execute functions in life or execute functions in life related to our utilization theory.

a. Take your time to think about the above explanation
b. What is the work theory?
c. The function of the physical system is to apply theory to enable the functionality of life. Verity this statement by providing a practical example.
d. The function of the physical system is to execute functions to enable its functionality. It can be shown that there is a similarity between work and the function of the physical system. It can also be shown that there is a similarity between the physical system's functions and the physical system itself. Verify that statement.
e. Verify that work is a contribution to life; you may also provide a practical example.
f. Verity your understanding of the work theory related to the following constant characteristics: self controllable, theory dependable, associativity. There is a relationship between the works theory and all three combined. You may show your understanding of the work theory related to that relationship. You may also provide an example if you want to.

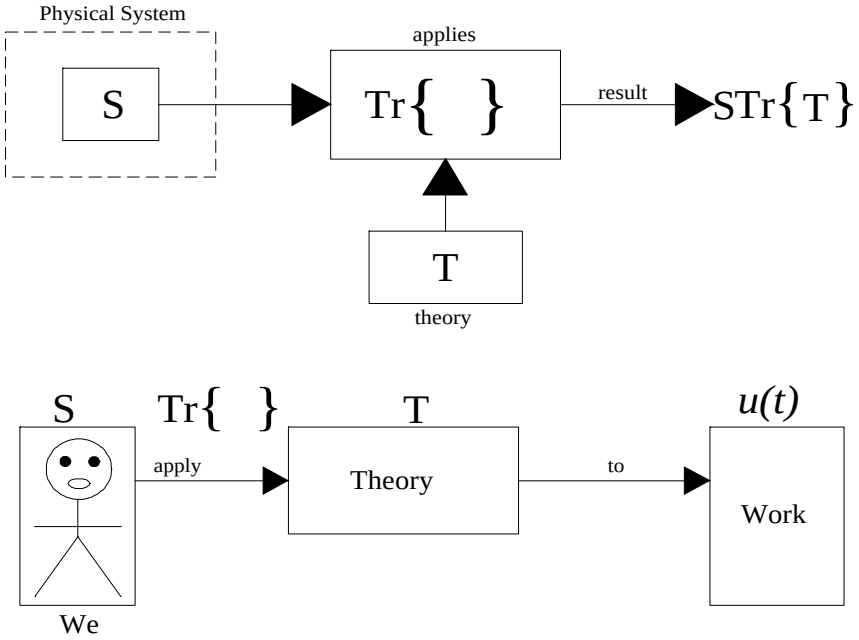
g. Verify your understanding of the work theory related to independency of theory.
h. We define problems as misapplication of theories or application of negative philosophies. Verity that definition related to work by providing a practical example.
i. Show your understanding of our utilization theory related to execution of functions in life. In other words, show your understand of our utilization theory related to work.
j. Which of those two statements make more sense to you and why: Misapplication of theory to work develops problems at work. Misapplication of theory to work develops problems in life.
k. To some extend, verity that statement. Works can also be defined as functions accomplished by the physical system to support the functional system or function accomplished by the physical system to enable its functionality.

159′. **Understanding the Work Theory:** We the physical system is defined as a theory dependable system. As a theory dependable system we have an intelligence that enables us to apply theory to derive and execute functions of life. To better understand our system related to the learning of theory, it is always good to represent them by a block diagram. The diagram below shows that theory gives us ideas to derive an execute functions. Another way to say it is that we learn or use theory to derive and executes function of life. As it shown by the diagram below, the functions that we execute are considered to be the output which is what we do.



From the diagram above, we can see that as a self controllable system, we depend on theory to gives us ideas to enable us to execute functions of life. It is always good to understand that the functions that we execute in life are related to the ideas that we get from theory. Given that work is the process of executing functions of life, the ideas that we get from theory enable us to work. While the diagram above shows that we get ideas from theory to execute functions, it is always good to represent a related block diagram that shows the application of the theory. The diagram below is similar to the one above. It shows that we apply theory to execute functions in life. Since work is the process of executing functions in life, we can label the output of the functions that we execute as work. This is basically what the diagrams below show. The first one shows that we apply theory to execute functions of life. The second diagram labels each entity

where it shows the functions that we execute in life are labeled as work. That makes a lot of senses, since we are a self controllable system and as a self controllable system, we rely on theory to give us ideas to execute functions of life. This is what the diagram shows. It shows that we apply ideas that we get from theory to work.



From the diagram above, it shows that when we work, we simply execute functions of life and when we execute functions of life, we also work. It is very important to understand that relationship.

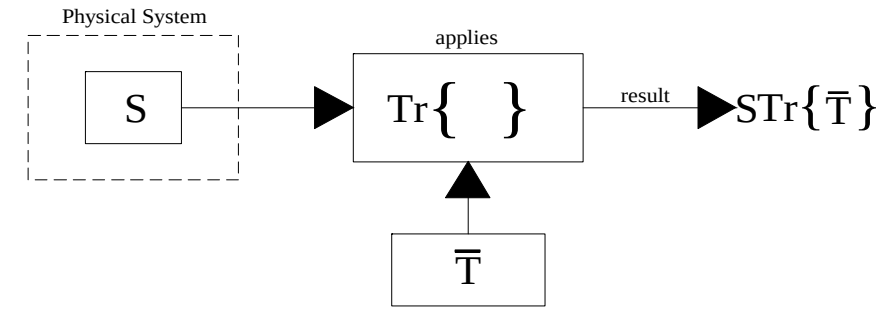
We know that the physical system is defined as theory dependable and self controllable; the term theory dependable maps together with self controllable. We know that we are an associative system. As an associative system, our lives depend on each other. There is no way one person can live without the need of others. When it comes to theory application, it is always good to understand the terms self controllable, theory dependable, and associativity. We know that we apply our utilization theory to enable us to execute functions of life. While we depend on each other to live, however we cannot apply theory for each other. It is very important to understand that and we have already learned that before. The way to look at it, while we work together to execute functions of life, however each of us apply theory independently to execute those functions. As a theory dependable system, it is very important to understand that.

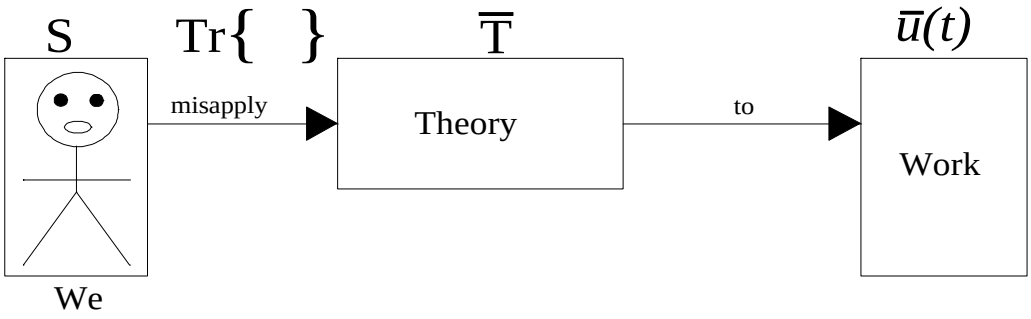
Theories are useful to us since they give us ideas to execute functions in life. While theories are useful, they also develop problems when they are misused or disregarded. We know that problems are defined as misapplication of theories or application of negative philosophies. In other words, we create problems when

we disregard our utilization theory and apply our negative philosophies as shown by the equations below. Given that the functions that we execute in life rely on our ideas, whenever those ideas are not good the functions that we execute will not execute properly. The results of those executions will develop problems in life. It is very important to understand problems development from negative philosophies related to functions executions in life.

$$T_r\{T\} = solution \qquad \text{While} \qquad T_r\{\overline{T}\} = problem$$

The diagrams below show what happen when we misapply or disregard theory to execute functions in life. The first diagram shows that we develop problems in life when we misapply theory, while the second one is simply another representation of the first one to enable us to understand it better. It shows that when we misapply our disregarded theory, our works resulted to problems.





a. Take your time to think about the above explanation
b. What is the work theory?
c. The function of the physical system is to apply theory to enable the functionality of life. Verity this statement by providing a practical example.
d. The function of the physical system is to execute functions to enable its functionality. It can be shown that there is a similarity between work and the function of the physical system. It can also be shown that there is a similarity between the physical system's functions and the physical system itself. Verity that statement. Which the same is as verify the following relationship related to work.

$$STr\{T\} \Rightarrow u(t)$$

e. Verify that work is a contribution to life; you may also provide a practical example. Which is the same as verity the following relationship; from the relationship we can also say that work is defined as a contribution to life.

$$Work \Rightarrow \mathcal{L}(t)$$

It may even be better to show that relationship in the form of

$$W_T \Rightarrow \mathcal{L}(t)$$

f. Verity your understanding of the work theory related to the following constant characteristics: self controllable, theory dependable, associativity. There is a relationship between the work theory and all three combined. You may show your understand of the work theory related to that relationship. You may also provide an example if you want to.
g. Verify your understanding of the work theory related to independency of theory. You can also think it as verify your understanding of independency of theory related to the work theory.
h. We define problems as misapplication of theories or application of negative philosophies. Verity that definition related to work by providing a practical example. Which the same is as verify the following relationship related to work. In this case, we can also say related problem rather than work.

$$STr\{\overline{T}\} \Rightarrow \bar{u}(t)$$

i. Show your understanding of our utilization theory related to execution of functions in life. In other words, show your understand of our utilization theory related to work.
j. Which of those two statements make more sense to you and why: Misapplication of theory to work develops problems at work. Misapplication of theory to work develops problems in life.
k. Using the life equation, show that work is a contribution to life. Depend how you do part e above, you can skip this one.

160. Show your understanding of the physical system communication enabled characteristic related to the work theory. This is the same as saying that, show your understanding of the work theory related to the physical system communication enabled characteristic.

161. State two parent's principles related to the work theory and verify your understanding of those principles. This can be viewed as two principles that include in the work theory and verify your understanding of those principles.

162. Show your understanding of the functional system related to information theory. This is the same as saying, show your understanding of information theory related to the functional system.

162′. Using algebra to show your understanding of information theory related to the functional system. This is the same as saying use algebra to show your understanding of the functional system related to information theory.

163. Show your understanding of the physical system related to information theory. This is the same as saying, show your understanding of information theory related to the physical system.

163′. Using algebra to show your understanding of information theory related to the physical system. This is the same as saying use algebra to show your understanding of the physical system related to information theory.

164. **An Introduction to Active Theory:** The term active theory means that since a self programmable system depends on theory in order for the system to function, we must continue using the theory to keep normal functionality of our system. Since the theory is active all the time to that system, we call the expression active theory.

Another way to look at it, a theory is presented by an instructor, where both the instructor and the students must apply that theory in order to ensure their functionalities. Rather than looking the application of that theory to apply it, the student must not look the instructor application in order to apply the theory. The students must apply the theory without concerning how the instructor applies it. Since physically the instructor will not stay active all the time, it is better to apply the theory without the instructor concern, hence the terms **active theory**. Also, when the instructor makes a mistake for instance, the students don't want to make it as well. So it is better to follow the theory without concerning the way the instructor applies it or what the instructor does.

a. Think about the paragraphs above
b. Explain or show your experience about the term active theory related to the above observation.
c. Verify that it is not the theory that is active, but the system is active by applying the theory.

164′. Using algebra to workout the above exercise, if you want to, you can include drawings in your workout. All you need to do, rework out the above example by using algebra and provide a practical example.

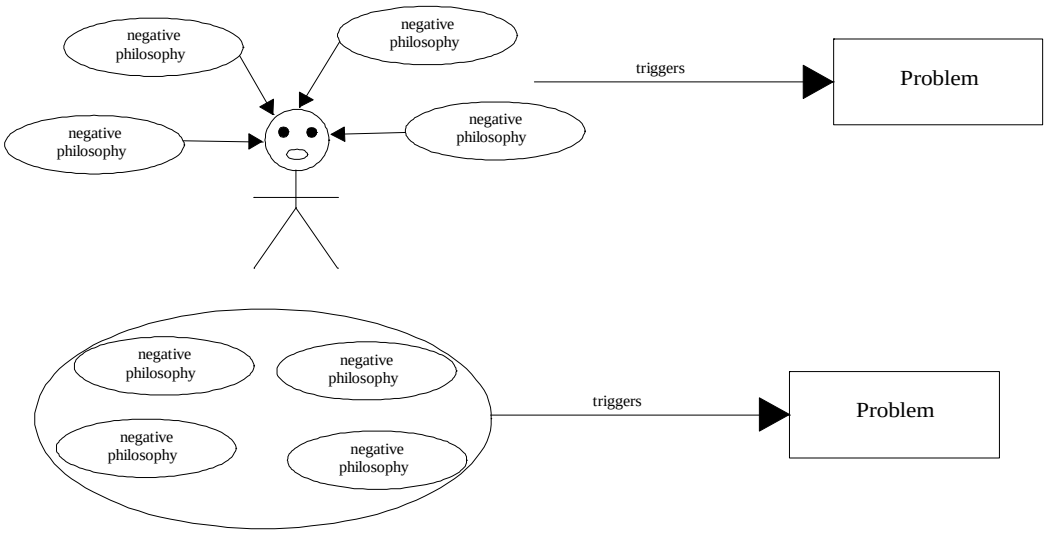
165. Show your understanding of the physical system related to the work theory. This is the same as saying that show your understanding of the work theory related to the physical system.

165′. Show your understanding of the work theory related to the physical system equation. In this case we can also say the relationship between the work theory and the physical system in the following form.

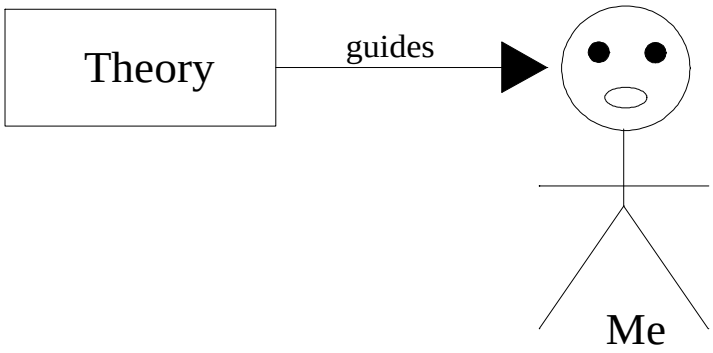
$$W_T \Leftrightarrow \left(x_1 + x_2 + x_3 + \cdots + x_N\right)k$$

Depend how work it out, if you want to you can also take it this way. Use the physical system equation to show your understanding of the physical system related to the work theory.

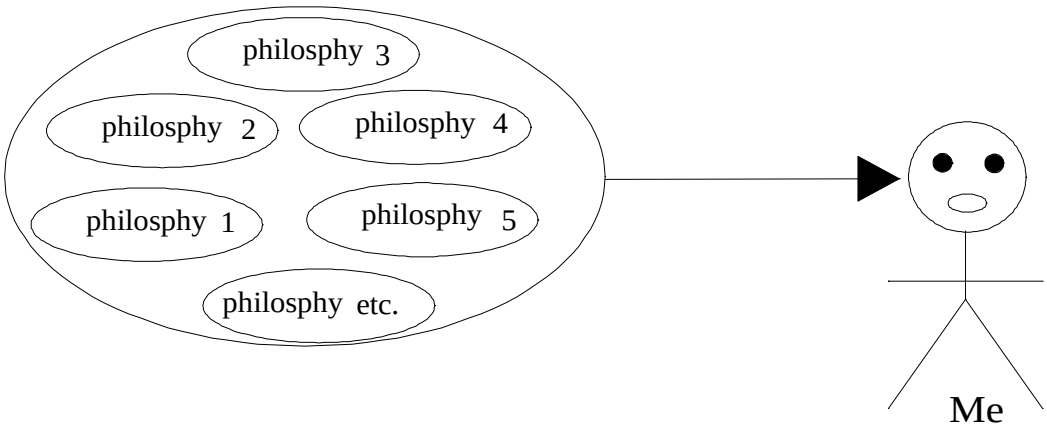
166. **Personal Stability Related to Problem Development:** We can also say personal stability related to problems triggering. We know that a problem is an event that is triggered by us—the physical system. That means in order for a problem to happen, we must trigger it or it must be triggered by someone. If we look at the process of problem development, we can observe the following. The negative philosophies are the ones that trigger the problems as shown by the diagram below.



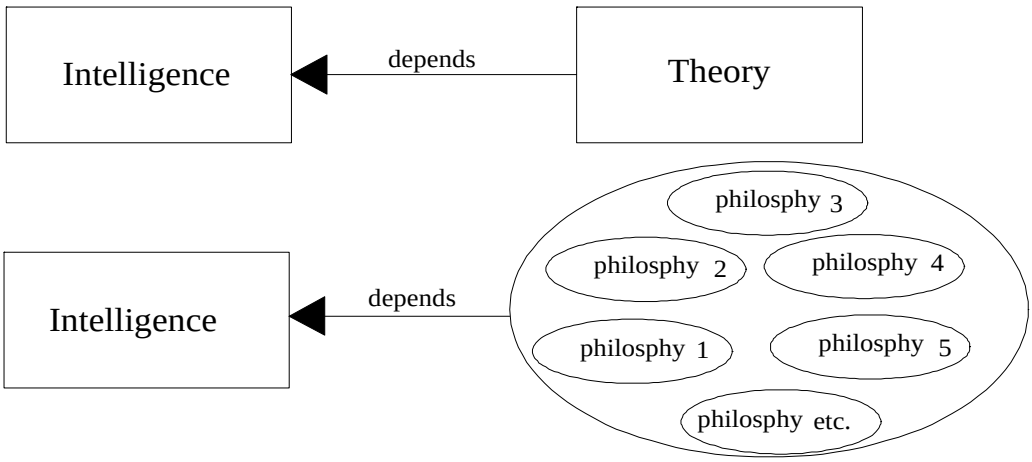
Now, let's look at the physical system stability related to theory. We already know that our parent principles are very portable and we must apply them anywhere we are present. Since we are guided by one set of principles and we use it everywhere we are, there is no fluctuation in our mind. To better understand the preceded sentence, it is worthwhile to look at both when our intelligence depends on theory and when it depends on philosophy. The diagram below shows our physical system being guided by our parent's principles. Since the physical system stability is responsible by each person physically, or by each individual, in this case, "I can say that I am guided by my parent principles". "Given that my parent principle is unique, I am well protected".



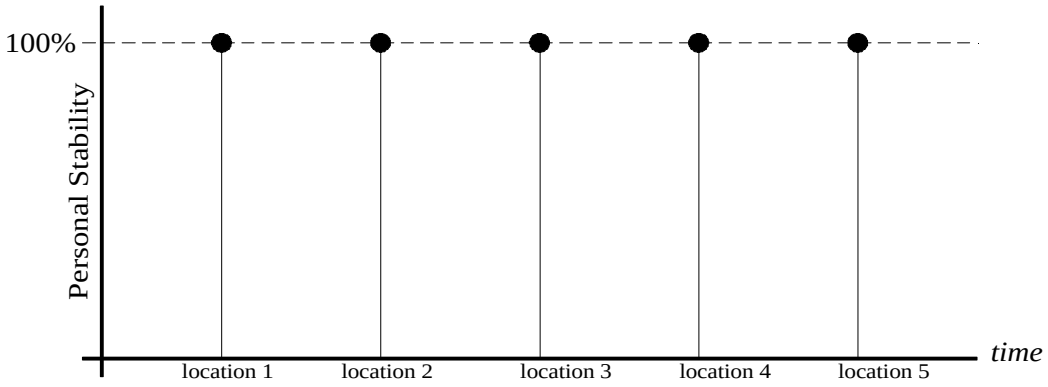
Now, let's look at the diagram below when we depend on philosophies. There are so many of them, we don't know which to choose, and we are very confusing. From the diagram below, we can say that our system is not guided at all. In this case, in our mind, we don't have a unique view of things. Comparing from the above diagram, we see things completely different. Since our intelligence depends on a unique set of principle to function, any random set of ideas can create problems in our mind. With that, ideas fluctuation can be a problem anywhere we present.

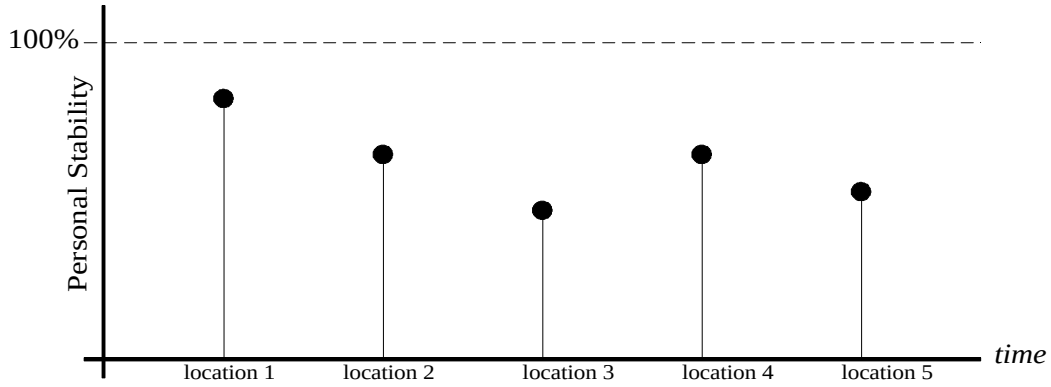


By looking at the two diagrams above, we can summary them as follow. The fist one shows that our intelligence depends on theory, while the second one shows that; our intelligence depends on a random set of ideas. The first one provides our intelligence with a constant linearity, while the second one provides our intelligence with fluctuation.



When we say that it provides our intelligence with a constant linearity, we mean that our intelligence depends on one set of principle that remains constant. When we mean that the second diagram enables our intelligence to fluctuate, we mean that our intelligence is not stable from the second diagram, which means it keeps changing. To better understand the process, let's represent the graphical presentation of both diagrams. The theory guided diagram shows that our mind is very stable related to time and location. The way to look at it, anywhere we are, we depend on one set of principles. The second one shows the philosophy dependable diagram; from the graph, we can see that our mind keep fluctuated and it is not stable anywhere we are.





When we look at the process of problem development, we see that problems are triggered due to the fact we are not personally stable. It is very easy to see that problems are triggered by the fluctuation of our stability as shown in the second diagram above. Another way to look at it, given that a person whose triggered a problem was at a time stable, it make sense to see that the fluctuation of the personal stability causes that person to trigger that problem. To prevent problems development, it is always good for all of us personally to be 100% stable at all times and at all places as shown from the first diagram above. That means we feel 100% comfortable and confident everywhere we are at all times.

a. What determine our personal stability?
b. What determine personal instability?
c. Show with a practical example that many problems triggered by the cause of our personal stability. That means shows that the fluctuation of personal stability gives rise to problems. Also show that it is always good for the personal stability to be at the highest level or 100%.

166′. Using algebra to workout the above exercise. In other words, use algebra to workout all parts from the above exercise.

167. Show your understanding of communication theory related to information theory. This is the same as saying show your understanding of information theory related to the theory of communication.

167′. Using algebra to show your understanding of information theory related to the theory of communication. This is the same as saying use algebra to show your understanding of theory of communication related to information theory

168. Show your understanding of existing functions related to the work theory. This is the same as saying that show your understanding of the work theory related to existing functions.

169. Show your understanding of the work theory related to both existing and added functions. This is the same as saying show your understanding of the work

theory related to the functional system. Or show your understanding of the functional system related to the work theory. You can workout this exercise in three parts, first you can show your understanding of the work theory related to added function, and then you show your understanding of the work theory related to existing function. Then later, you can show your understanding of the work theory related to the functional system.

169′. If you have not done so, you can rework out the above exercise by using algebra. In other words, use algebra to show your understanding of the work theory related to the functional system. This is the same as saying show your understanding of the functional system related to the work theory by using algebra.

170. Show your understanding of the physical system self controllable characteristic related to the work theory. This is the same as saying show your understanding of the work theory related to the self controllable characteristic of the physical system.

171. Show your understanding of the physical system theory dependability characteristic related to the work theory. This is the same as saying show your understanding of the work theory related to the theory dependability of the physical system.

172. Show your understanding of the work theory related to life. This is the same as saying, show your understanding of life related to the work theory.

172′. Show your understanding of the work theory related to the life equation. In this case, we can also say the relationship between the work theory and the life equation in the following form.

$$Work \Leftrightarrow \mathcal{L}(t)$$

$$\mathcal{L}(t) = h(t) + u(t)$$

$$h(t) = \sum_{n=1}^{\infty} h_n(t) \quad \text{and} \quad u(t) = \sum_{m=1}^{M} u_m(t)$$

173. Refer to exercise 140 repeat it for the following theory shown on the table below. In other words, you refer to the exercise, you read it and think about it, then show the purpose of the work theory and the reproduction theory.

Theory Name	Abbreviation
The Work Theory	W_T

The Reproduction Theory	X_T

174. Show your understanding of the physical system associativity relationship related to the work theory. This is the same as saying show your understanding of the work theory related to the associativity relationship of the physical system.

175. Show your understanding of the gaming theory related to information theory. This is the same as saying, show your understanding of information theory related to the gaming theory.

175′. Use algebra to show your understanding of the gaming theory related to information theory. This is the same as saying, show your understanding of information theory related to the gaming theory by using algebra.

176. You have shown that the gaming theory is passive. By now, you should have a very good understanding of the gaming theory and also existing functions. Verify your understanding of existing functions related to the gaming theory by providing a practical example. This is the same as saying that verify your understanding of the gaming theory related to existing functions.

177. Show your understanding of the functional system related to the gaming theory. This is the same as saying, show your understanding of the gaming theory related to the functional system. If you want to, you can provide a practical example in your workout.

177′. Using algebra to show your understanding of the gaming theory related to the functional system. This is the same as saying use algebra to show your understanding of the functional system related to the gaming theory.

178. Show your understanding of the physical system related to the gaming theory. This is the same as saying, show your understanding of the gaming theory related to the physical system. If you wan to, you can provide a practical example in your workout.

178′. Using algebra to show your understanding of the gaming theory related to the physical system. This is the same as saying use algebra to show your understanding of the physical system related to the gaming theory. You must provide a practical example in your workout.

179. We have learned a lot about the difference between theory and philosophy. Another difference between theory and philosophy is that theories are given entity, where in the other hand philosophies are generated entity. Another way to say it, theories are given where philosophies are personally generated. Verify that statement by providing a practical example.

179′. Using algebra to workout the exercise above. In other words, use algebra to verify that theories are given entity, while philosophies are personally generated entities.

180. Show your understanding of information theory related to instrumentation theory. This is the same as saying, show your understanding of instrumentation theory related to information theory.

181. Show your understanding of the difference between theory and philosophy related to the theory of marketing. This is the same as saying show your understanding of the theory of marketing related to the difference between theory and philosophy.

181′. Using algebra to show your understanding of the difference between theory and philosophy related to the theory of marketing. This is the same as saying that use algebra to show your understanding of the theory of marketing related to the difference between theory and philosophy.

182. **Understanding Philosophy Inheritance Related to History:** We may have seen that before and we all understand that. A negative philosophy that was initially generated from the past cannot be destroyed, until it is dropped and replaced by our parent principles. The way to look at it, any negative philosophy that was generated from the past, is still present today without replaced by our utilization theory. Given that philosophies are not independent entity, as one initiated, more negative philosophies are derived from the initial one. In this case, we continue inherit and inherit more negative philosophies. It is very easy to see that process related to history. For instance, if we look at some events from the past related to some event at present time, it is very easy to see the similarity between them. The reason for that, because the philosophies that generate those event are still around, therefore the events from the past that are derived from those philosophies are similar to those of today. The best way to approach what we have just said is to look at specific country's history. Since all of us live in a country, we can take the country we live for example and look at events from the past related to present events and do some analysis on them to determine similarity. By doing so, we can quickly see how those two events are related in terms of philosophies. It does not matter the way we look at it. It does not matter if we look at historical events from the country we are living or any other country, what is important is the relationship of those events and our understanding of philosophy inheritance.
    a. Take your time to think about the above paragraph
    b. To better understand philosophy inheritance related to historical events, take two historical events and analyze them. The way to look at it, you can take your country history as an example or any other history or country history. You can take an event from the past and one from the present. Analyze both of them and determine if philosophy inheritance is a factor. If there is no present event or whatever you want, you can take two events

from the past; just take one before another one. Analyze both of them to look at similarity and determine how philosophy inheritance plays into that. You must also identify the philosophy in your work.

c. The fact that a negative philosophy can only be discarded if it is replaced by our utilization theory, it is very important for us to take our utilization theory into consideration when we do things. Once we realize the importance of our utilization theory, we must do things according to it. From part b and from the paragraph above, we have analyzed two events from history and determine how philosophy inheritance plays on them. With our understanding of our utilization theory and executing function according to it, we can see that it does not make sense. By understanding of our theory, it is better for us to drop any negative philosophy and execute functions according to our parent principles. Depend how you do part b above, you can quickly see that and ask yourself this question. If the first event is negative, how comes the second event happens? As we already said here, the reason for that is because our parent principles have been disregarded. As longer our parent principles have been disregarded, there is no limit on how negative we can do things and there is no limit on repeating what we have done negatively from the past. To prevent that, it is always better for us to apply our utilization theory. To prevent that, we must always apply our utilization theory. Based on what we have said here, if you have chosen events from your country history, you may have had some questions in mind. Disregard how many and what question you have in mind, it is always better to ask this question as well. Is my country history has been taken for granted? The way to look at it, if we have done things from the past negatively, today we realize the importance of our parent principles, there is no way and no need for us to continue doing things negatively. It is always better and it is always in our advantage to start doing things positively. If we keep disregarding our parents principles and continue doing things negatively, we simply take our history for granted. In this case, we can say our country history has been taken for granted. It is always good and it is always in our advantage not to take history for granted. Given that we inherit negative philosophies from the past, it is always good for us not to take history for granted and apply our parent principles. Verify whether or not your country history has been taken for granted and justify your analysis.

d. Depend how you look at part b and c, you can do a play and a movie with part c. You can take the analysis of the event into consideration. While you can tackle the negative part, it is always better to look at things in a positive approach. With that, your movie or play can look at by not taking your country history for granted, how things could have been done differently at present time. For instance, since it was done negatively from the past, today this how it could have been done differently or how it can be done differently. Another way to look at it, you can think of something like this. Related to the past event or events, how things could have been done today? For part b and c, you can title your work historical events

analysis related to philosophy inheritance or current events analysis related to philosophy inheritance.

183. Refer to the exercise above, using the physical system representation in term of philosophy do part b and c using timeline to show the negative philosophies related to today's event or the latest one. Beside that, you can also use your understanding of the application of theory, which is the opposite to show the execution of those events as negative functions.

183′. Refer to the exercise above, using the physical system equation, we mean the mistaken equation as it is given below. Do part b and c; using timeline to show the negative philosophies related to today's event or the latest one. Beside that, you can also use the theory application equation, which is the opposite to show the execution of the events as negative functions.

$$S(xy)=(x_1+x_2+x_3+\cdots+x_N)(y_1+y_2+y_3+\cdots+y_N)$$

184. Verify the following statement the physical system is mobile; its utilization theory is also portable. The physical system is mobile; its utilization theory must be portable as well. Verify your understanding of that statement related to information theory. You can take quantity of information into consideration related to presentation of information

185. Refer to exercise number 1 and verify your definition for each item you identified and defined. We mean refer to the grammatical terms exercise and verify each term you have defined.

186. Show your understanding of portability of theory related to interpretation of theory. This is the same as saying, show your understanding of interpretation of theory related to portability of theory.

187. Show your understanding of the difference between theory and philosophy related to the exchange system theory. This is the same as saying show your understanding of the exchange system theory related to the difference between theory and philosophy.

187′. Using algebra to show your understanding of the difference between theory and philosophy related to the exchange system theory. This is the same as saying use algebra to show your understanding of the exchange system theory related to the difference between theory and philosophy.

188. Show your understanding of the physical system related to the theory of marketing. This is the same as saying show your understanding of the theory of marketing related to the physical system.

188′. Using algebra to show your understanding of the physical system related to the theory of marketing. This is the same as saying show your understanding of the theory of marketing related to the physical system by using algebra

189. Show your understanding of non attached instruments related to attached instruments in the physical system. This is the same as saying show your understanding of the physical system related to both attached and non attached instruments.

190. Show your understanding of the difference between theory and philosophy related to relationship of theory and system. This is the same as saying show your understanding of the relationship of theory and system related to the difference between theory and philosophy.

191. Show your understanding of portability of theory related to importance of theory. This is the same as saying, show your understanding of importance of theory related to portability of theory.

192. **Understanding the Principles of Simulation:** By now we should have already known that life is a real-time system. What do we mean by a real-time system, we mean that as we speak, functions are executed in life? Many functions execute in life through a process that within the system itself. In this case, we can say that the overall system decide the execution of the function. While the overall system makes up of many system that function together and execute specific function, in this case there are times when functions are execute by many of those systems that are not decided by the time the functions are executed. The way to look at it, while a system may perform a function or a unique function, that function may happen at a time that is not decided by the system itself. When we talk about function simulation in life, we talk about function that are executed at a time that is not decided by the overall system, but decide by the system that executes the function. There are many, many functions in life that cannot be simulated.

From the gaming theory exercise, we have learned that the gamming theory is considered to be a passive theory. Depend how we work out the exercise, we could have conclude that the reason the gaming theory is passive, because they are many or all functions that are executed when playing games are considered to be neutral. In short, we can say that the gaming theory is passive because the functions we execute when we play games are neutral. That means that they don't have any effect on the overall system and they don't have any effect on us or individual system as well. Now, by inspection we can see there is a relationship between the gaming theory and the simulation principles related to function's simulation. By inspection, we can see that there is a relationship between neutral functions and simulated functions. For instance, we can conclude that the neutral functions can be simulated, where non neutral functions cannot be simulated.

a. Show your understanding of the simulation principles and provide an example of a function in life that is accomplished by the physical system that cannot be simulated by providing a practical example.
b. From the part above, show any problem that may have been developed by that function when trying to simulate that function. Keep in mind that whenever a principle is disregarded, problems arise. Whenever we disregard the simulation principle and try to simulate functions that cannot be simulated, we also develop problems.

193. Show your understanding of the physical system related to the exchange system theory. This is the same as saying show your understanding of exchange system theory related to the physical system.

193′. Using algebra to show your understanding of the exchange system theory related to the physical system. This is the same as saying use algebra to show your understanding of the physical system related to the theory of marketing.

194. Show your understanding of the physical system related to added functions and the work theory. In other words, show your understanding of the work theory related to the physical system and the added functions of life.

195. Show your understanding of the physical system, the functional system, and the work theory. This is the same as saying that, show your understanding of the work theory related to both functional system and the physical system.

196. Show your understanding of communication theory related to the work theory. This is the same as saying show your understanding of the work theory related to communication theory.

197. Show your understanding of the information theory related to the work theory. This is the same as saying that show your understanding of the work theory related to information theory.

198. Using Show your understanding of the work theory related to information theory. This is the same as saying use algebra show your understanding of information theory related to the work theory.

199. Show your understanding of the difference between theory and philosophy related to the work theory. This is the same as saying show your understanding of the work theory related to the difference between theory and philosophy.

199′. Using algebra to show your understanding of the difference between theory and philosophy related to the work theory. This is the same as saying use algebra to show your understanding of the work theory related to the difference between theory and philosophy.

200. From interpretation of theory, we have learned that a theory that is presented at a location may take that location into consideration in term of interpretation; nevertheless, the theory does not change. By understanding theory, presentation of theory, interpretation of theory, and the physical system, it can be shown that the presentation of a theory and the interpretation of a theory does not change that theory at all, disregard the area and the time it is presented. By understanding this exercise, verify what we have just said. In other words, show that the presentation and the interpretation of a theory does not change that theory, disregard the time and the area it is presented.

200′. Using algebra to work out the above exercise. In other words, by understanding the above exercise, use algebra to show that the presentation and the interpretation of a theory do not change that theory disregard the time and the area it is presented.

201. By understanding the above exercise, we can see that the direct interpretation of a theory can never be absolute or correct all the time. In other words, since the presentation may take the area into consideration, the direct interpretation of that theory can never be the same. We can also say that, the direct interpretation or the direct way of looking at it may never be the same. That makes a lot of senses; related to the physical system, we can see that makes sense as well. By understanding theory, presentation of theory, interpretation of theory, you can verify that. In other words, show that the direct interpretation of a theory may never be absolute.

201′. Using algebra to workout the above exercise. In other words, by understanding the above exercise, it can be shown that the direct interpretation of a theory can never be absolute, just show or verify that by using algebra.

202. By understanding the physical system and the functional system, show the reduction of philosophies by taking distance into consideration. In other words, by taking distance into consideration, show that philosophies can be reduced.

202′. The mistaken equation was given to us in the form of

$$S(xy)=(x_1+x_2+x_3+\cdots+x_n)(y_1+y_2+y_3+\cdots+y_n)$$

By understanding the physical system, philosophy, and effect of philosophy on system, the terms can be reduced tremendously. Using the mistaken equation above to show that and verify that by providing an explanation. You can also use diagram with your workout if you want to and show your observation.

203. Show that the fundamental of our utilization theory is equal to the fundamental of all of the theories that we have identified combined. In other words, show that the fundamental of our utilization theory is the combination of the fundamental of all the theories that we have identified.

203′. Verify that

$$f_{U_T} = \left\{ f_{T_1} + f_{T_2} + f_{T_3} + f_{T_4} + f_{T_5} + f_{T_6} + f_{T_7} + f_{T_8} + f_{T_9} + f_{T_{10}} \right\}$$

This is the same as

$$f_{U_T} = \left\{ f_{K_T} + f_{i_T} + f_{I_T} + f_{P_T} + f_{E_T} + f_{M_T} + f_{Es_T} + f_{G_T} + f_{W_T} + f_{X_T} \right\}$$

204. By having a good understanding of our utilization theory and also fundamental of our utilization theory. It can be shown that our utilization theory is unity or it is defined as unity; verify that statement. In other words, show that our utilization theory is defined as unity. Our utilization theory is listed on this table.

Order	Theory Name	Abbreviation	Abbreviation
1	The Communication Theory	K_T	f_{K_T}
2	The Information Theory	i_T	f_{i_T}
3	The Instrumentation Theory	I_T	f_{I_T}
4	The Power Theorem	P_T	f_{P_T}
5	The Theory of Education	E_T	f_{E_T}
6	The Theory of Marketing	M_T	f_{M_T}
7	The Exchange System Theory	Es_T	f_{Es_T}
8	The Gaming Theory	G_T	f_{G_T}
9	The Work Theory	W_T	f_{W_T}
10	The Theory of Reproduction	X_T	f_{X_T}

a. First, draw the similarity relationship diagram that represents both the fundamental of our utilization theory and our utilization theory; don't worry about any order of the theory. You may provide a statement that leads you to each similarity.
b. Second, by understanding the relationship of theory and fundamental of theory; by understanding the relationship between our utilization theory and the fundamental of our utilization theory, show that our utilization theory is defined as unity.

204′. From what we know about theory and fundamental of theory, we have the following relationship.

$$\text{If} \quad f_{T_1} \sim f_{T_2} \quad \text{Then} \quad T_1 \sim T_2$$

Our utilization theory was given to us, and it is made of 10 theories. Below is the representation of our utilization theory by number as shown below.

$$U_T = \{T_1, T_2, T_3, T_4, T_5, T_6, T_7, T_8, T_9, T_{10}\}$$

The theories from the group above are identified by their abbreviations. Don't worry about the order; any theory from the list below can be identified by any number from the list above.

$$U_T = \{K_T, i_T, I_T, P_T, E_T, M_T, Es_T, G_T, W_T, X_T\}$$

We have said that the commas that separate the theories from the group above can be replaced by the plus sign to give us the following

$$U_T = \{T_1 + T_2 + T_3 + T_4 + T_5 + T_6 + T_7 + T_8 + T_9 + T_{10}\}$$

$$U_T = \{K_T + i_T + I_T + P_T + E_T + M_T + Es_T + G_T + W_T + X_T\}$$

The table below list the theory names their abbreviations and their fundamentals equivalent related to the abbreviations.

Order	Theory Name	Abbreviation	Abbreviation
1	The Communication Theory	K_T	f_{K_T}
2	The Information Theory	i_T	f_{i_T}
3	The Instrumentation Theory	I_T	f_{I_T}
4	The Power Theorem	P_T	f_{P_T}
5	The Theory of Education	E_T	f_{E_T}
6	The Theory of Marketing	M_T	f_{M_T}
7	The Exchange System Theory	Es_T	f_{Es_T}
8	The Gaming Theory	G_T	f_{G_T}

9	The Work Theory	W_T	f_{W_T}
10	The Theory of Reproduction	X_T	f_{X_T}

a. Draw the similarity relationship diagram that represents both the fundamental of our utilization theory and our utilization theory; don't worry about any order of the theory. You may provide a statement that leads you to each similarity.
b. By understanding the relationship of theory and fundamental of theory; by understanding the relationship between our utilization theory and the fundamental of our utilization theory, it can be shown that

$$U_T = U_T$$

Or in another form that our utilization theory is equal to unity; show that U_T is equal to unity or.

$$U_T = 1$$

$$U_T \equiv 1$$

In that case, 1 is interpreted as unity or unique

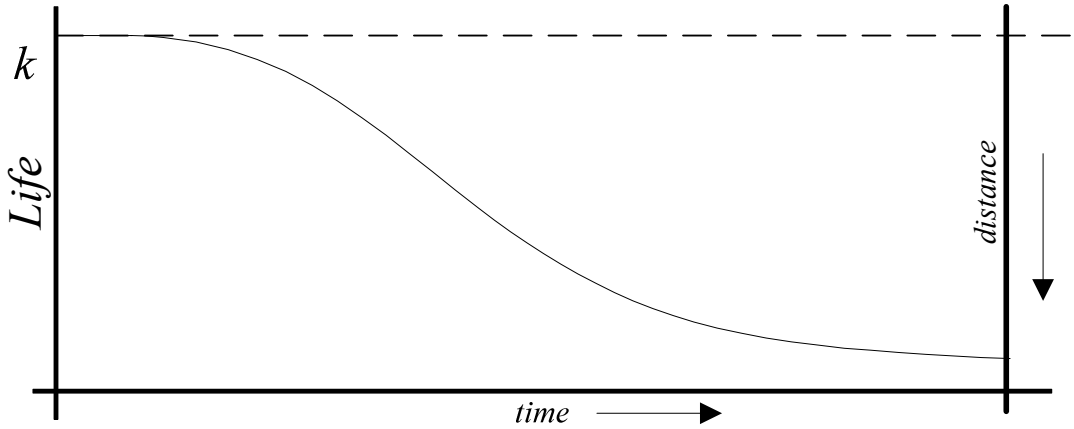
205. Now that you have a good understanding of our utilization theory, refer to exercise number 43 multi-parent society and show your understanding of our utilization theory related to that term. In other words, show your understanding of the term related to our utilization theory. We mean the relationship in term of similarity. You can use diagrams in your workout.

205′. Now that you have a very good understanding of our utilization theory. Refer to exercise number 43, multi-parent society and use algebra to show the relationship of that term with our utilization theory. You can look at it in term of similarity. You can also use diagrams in your workout.

206. **Understanding Life and the Physical System:** As an associative system, our utilization theory enables us to interact to each other. We need our utilization theory in order to interact to each other to enable the functionality of life. In the event that we interact to each other without the use of our utilization theory, we simply develop problems in life. By understanding exercise number 147, we have seen that our utilization theory is very important to us, since we must use it to interact to each other.

Related to what we have said above, we can use history to verify the importance of our utilization theory and the relationship of life and our utilization theory. If we look at the world history by taking countries into consideration in terms of

people, we can see that distance between each other affects the performance of the functional system a lot. For instance, we can look at the functional system before the distance and after the distance related to history and see the declining of the functional system as a matter of distance. Graphically, we can see that as our distance decreases, the functional system also declines, as shown by the graph below. From the graph, we can see as we get closer to each other, in other words, as the distance between us reduced, without the usage of our utilization theory, the functional system performance decreases dramatically.

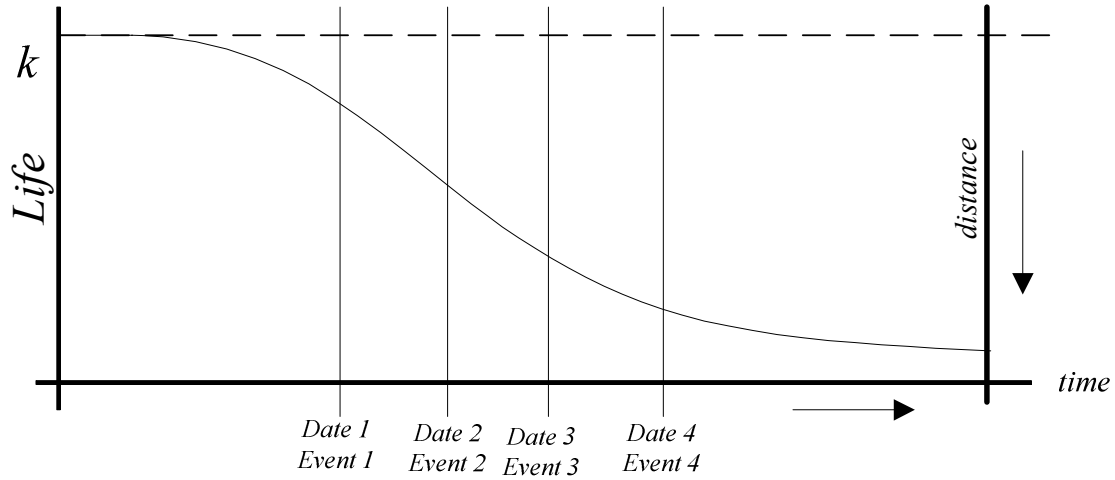


While using the graph, we can also use a table instead if we want to. The table below shows what we are taking about.

Distance Between Us	Functional System Performance
Greater distance	OK
Less distance	Declining
Less, less distance	More declining

To show that, you can use history and look at distance in terms of date to show the declining of life; you can also use date and event to show that. For instance you can analyze an event before and after the distance to show how that event contributed or caused by the distance. Then you can conclude in your workout, indeed our distance affects the functional system and when we don't use our utilization theory do interact to each other, we simply develop problems. You can tabulate the events as shown by the table above.

For the overall exercise, all you need to do, pick couple of events from history, analyze them before and after the distance, then graphically, show the performance of the functional system related to those events and distance. You can use the graph below for additional information.



206′. **Understanding Life and the Physical System:** Perhaps, we can also say understanding the mistaken equation. We know that there is a relationship between the physical system and the functional system. As a theory dependable system, we, the physical system apply our utilization theory to enable the functionality of the functional system. Once we disregard the existence of our utilization theory, we depend on our philosophies and that causes life to function abnormal. By understanding that, we have the mistaken equation as shown below, which was given to us previously.

$$S(xy)=(x_1+x_2+x_3+\cdots+x_n)(y_1+y_2+y_3+\cdots+y_n)$$

By understanding our utilization theory, we know that we need our utilization theory to interact to each other. In the even that we don't interact to each other with our utilization theory we simply develop problems in life. By understanding that, we can see that there is a relationship between the functional system equation and the physical system equation. From what we have jus said, we can put them together in the form of.

$$\mathcal{L}(t)\Leftrightarrow U_T$$

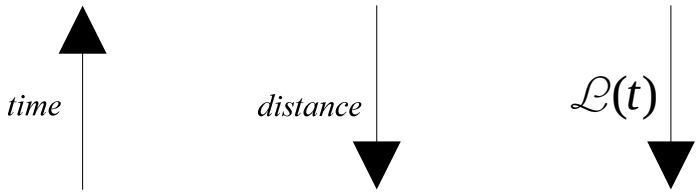
From what we have said above and from exercise 147, we know that we develop problems when we interact to each other without using our utilization theory. By understanding that from exercise 80, we have shown many events that happened in history that caused life to function abnormal. Those events happened due to the fact that we interact to each other without utilization of our parent principles. By understanding that exercise and what we have just said, we can see that it is very important for us to interact to each other by using our utilization theory. Once we misunderstanding that, we executed functions that are generated from our negatives philosophies that cause life to decay. As a result of that, from the same exercise we can see that the functional system continues to decay related to time as a result of many negative events in history.

By understanding what we have said above, exercise number 147, exercise number 80, and exercise number 202 and 202′, we can see that distance is a factor when we interact to each other. In other words, as we get closer to each other, we need to apply our parent principle. In the event that we don't apply our parent principle, once we get closer to each other, we simply develop problems. From what we have just said, we can see that distance is a factor in the mistaken equation in terms of problem development. In other words, the problems generated by the mistaken equation can be reduced with distance. Another way to say it, understanding the principle enables us to get closer to each other, however when we misunderstand or disregard the principle, we simply develop problems when we get closer to each other.

a. Just take your time to think about the overall explanation
b. By understanding the paragraph above and also the overall explanation, we can see that distance is a factor when it comes to problems we develop in life in term interacting to each other. Now, from exercise number 144, we have shown the decay of the functional system related to event in history. We have used a table to show the reduction of $\mathcal{L}(t)$ related to the events. We have also shown that graphically as well. Now, let's expand the same exercise by taking distance into consideration. To show that, you can continue the same exercise to show how distance affect the functional system. You can show that both graphically and in a table format. You can also go back farther in history to show that. To show that in a table format, you can use a table as shown below. All you need to do, pick the events and analyze them to show that.

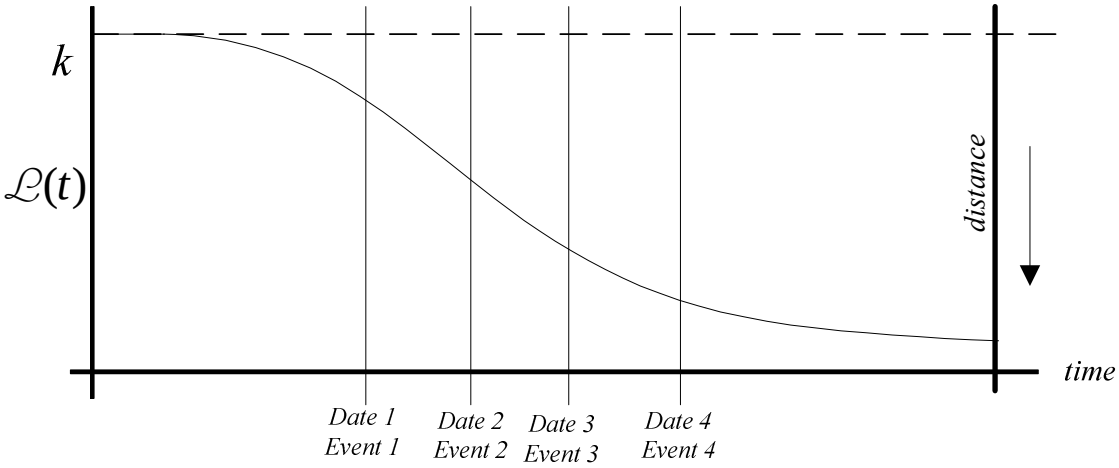
Year	Distance Between Us	Event	$\mathcal{L}(t)$
Date 1	Less	Event 1	Drop
Date 2	Less, Less	Event 2	Drop more

Similar to the table format, you can also do it graphically in the following form. In this case, we know the following. As time goes up, distance goes down, life also goes down, as shown by the diagram below.



Related from the diagram below, you can construct a graph in the following form. As shown by the graph below, the $\mathcal{L}(t)$ continues to decay as distance decreases. For the overall exercise, all you have to do, pick the events and analyze them in terms of distance. Look at the event before the distance and look at the same event after the distance and look at $\mathcal{L}(t)$ in both cases. We

mean look at $\mathcal{L}(t)$ before the event, and as distance reduced, look at $\mathcal{L}(t)$ again after the event. In all cases, you have to show your observation and your analysis. You need to analyze the events in term of distances to show how the distances affect the events. For instance, does the distance attribute to the event? For instance, before the event, the distance was far; as we get closer in terms of distance, the events happened.



c. By understanding part b above, you have shown that distance is a factor for the physical system without applying our utilization theory. In other words, without using the principle, the closer we get to each other, the more problems we develop. While you have shown that historically, it could have been done algebraically without using any history. You can continue exercise #(power interfacing) to show that algebraically. All you need to do, if you want to show that algebraically, simply wait until you get to the exercise.

207. Show your understanding of the functional system related to events in history. This is the same as saying that, show your understanding of events in history related to the functional systems. This can also be viewed as the stability of the functional system.

207′. Using algebra to show your understanding of the functional system related to events in history. This is the same as saying, use algebra to show your understanding of events in history related to the functional system. This can also be viewed as the stability of the functional system.

208. Show your understanding of the physical system related to events in history. This is the same as saying that, show your understanding of events in history related to the physical system. This can also be viewed as the stability of the physical system.

208′. Using algebra to show your understanding of events in history related to the physical system. This is the same as saying that, use algebra to show your

understanding of the physical system related to events in history. This can also be viewed as the stability of the physical system.

209. Show your understanding of the difference between theory and philosophy related to the relationship between theory and theory of communication. This is the same as saying show your understanding of the relationship between theory and theory of communication related to the difference between theory and philosophy.

209′. Using algebra to show your understanding of the difference between theory and philosophy related to the relationship between theory and theory of communication. This is the same as saying using algebra to show your understanding of the relationship between theory and theory of communication related to the difference between theory and philosophy.

210. Show your understanding of application of theory related to importance of theory. This is the same as saying, show your understanding of importance of theory related to application of theory.

210′. Using algebra to show your understanding of application of theory related to importance of theory. This is the same as saying, use algebra to show your understanding of importance of theory related to application of theory.

211. Show your understanding of importance of theory related to communication theory. This is the same as saying, show your understanding of communication theory related to impotence of theory.

212. Show your understanding of the work theory related to application of theory. This is the same as saying show your understanding of application of theory related to the work theory.

212′. Using algebra to show your understanding of the work theory related to application of theory. This is the same as saying use algebra to show your understanding of application of theory related to the work theory.

213. Show your understanding of the work theory related to portability of theory. This is the same as saying show your understanding of portability of theory related to the work theory.

214. Show your understanding of the work theory related to the theory of communication. This is the same as saying show your understanding of the theory of communication related to the work theory.

214′. Using algebra to show your understanding of the work theory related to the theory of communication. This is the same as saying use algebra to show your understanding of the theory of communication related to the work theory.

215. Show your understanding of the work theory related to expandability of theory. This is the same as saying show your understanding of expandability of theory related to the work theory.

215′. Using algebra to show your understanding of the work theory related to expandability of theory. This is the same as saying use algebra to show your understanding of expandability of theory related to the work theory.

216. Show your understanding of the work theory related to independency of theory. This is the same as saying show your understanding of independency of theory related to the work theory.

216′. Using algebra to show your understanding of the work theory related to independency of theory. This is the same as saying use algebra show your understanding of independency of theory related to the work theory.

217. Show your understanding of the work theory related to importance of theory. This is the same as saying show your understanding of importance of theory related to the work theory.

218. Show your understanding of information theory related to independency of theory. This is the same as saying show your understanding of independency of theory related to information theory.

218′. Using algebra to Show your understanding of information theory related to independency of theory. This is the same as saying use algebra to show your understanding of independency of theory related to information theory.

219. Show your understanding of information theory related to importance of theory. This is the same as saying show your understanding of importance of theory related to information theory.

220. Show your understanding of information theory related to interpretation of theory. This is the same as saying show your understanding of interpretation of theory related to information theory.

220′. Using algebra to show your understanding of information theory related to interpretation of theory. This is the same as saying use algebra to show your understanding of interpretation of theory related to information theory.

221. Show your understanding of instrumentation theory related to portability of theory. This is the same as saying show your understanding of portability of theory related to instrumentation theory.

222. Show your understanding of instrumentation theory related to theory of communication. This is the same as saying show your understanding of theory of communication related to instrumentation theory.

222′. Using algebra to show your understanding of instrumentation theory related to theory of communication. This is the same as saying use algebra to show your understanding of theory of communication related to instrumentation theory.

223. Show your understanding of instrumentation theory related to the functional system. This is the same as saying show your understanding of the functional system related to instrumentation theory.

223′. Using algebra to show your understanding of instrumentation theory related to the functional system. This is the same as saying use algebra to show your understanding of the functional system related to instrumentation theory.

224. Show your understanding of instrumentation theory related to independency of theory. This is the same as saying show your understanding of independency of theory related to instrumentation theory.

225. Show your understanding of instrumentation theory related to importance of theory. This is the same as saying show your understanding of importance of theory related to instrumentation theory.

226. Show your understanding of communication theory related to portability of theory. This is the same as saying show your understanding of portability of theory related to communication theory.

227. Show your understanding of communication theory related to the physical system. This is the same as saying show your understanding of the physical system related to communication theory.

227′. Using algebra to show your understanding of communication theory related to the physical system. This is the same as saying use algebra to show your understanding of the physical system related to communication theory.

228. Show your understanding of communication theory related to the functional system. This is the same as saying show your understanding of the functional system related to communication theory.

228′. Using algebra to show your understanding of communication theory related to the functional system. This is the same as saying use algebra to show your understanding of the functional system related to communication theory.

229. Show your understanding of communication theory related to independency of theory. This is the same as saying show your understanding of independency of theory related to communication theory.

230. Show your understanding of communication theory related to importance of theory. This is the same as saying show your understanding of importance of theory related to communication theory.

231. Show your understanding of the theory of marketing related to application of theory. This is the same as saying show your understanding of application of theory related to the theory of marketing.

231′. Using algebra to show your understanding of the theory of marketing related to application of theory. This is the same as saying use algebra to show your understanding of application of theory related to the theory of marketing.

232. Show your understanding of the theory of marketing related to importance of theory. This is the same as saying show your understanding of importance of theory related to theory of marketing.

233. Show your understanding of the exchange system theory related to application of theory. This is the same as saying show your understanding of application of theory related to the exchange system theory.

233′. Using algebra to show your understanding of the exchange system theory related to application of theory. This is the same as saying use algebra to show your understanding of application of theory related to the exchange system theory.

234. Show your understanding of the exchange system related to portability of theory. This is the same as saying show your understanding of portability of theory related to the exchange system theory.

234′. Use algebra to show your understanding of the exchange system related to portability of theory. This is the same as saying show your understanding of portability of theory related to the exchange system theory by using algebra.

235. Show your understanding of the exchange system theory related to importance of theory. This is the same as saying show your understanding of importance of theory related to the exchange system theory.

236. Show your understanding of the gaming theory related to application of theory. This is the same as saying show your understanding of application of theory related to the gaming theory.

236′. Using algebra to show your understanding of the gaming theory related to application of theory. This is the same as saying use algebra to show your understanding of application of theory related to the gaming theory

237. Show your understanding of the gaming theory related to portability of theory. This is the same as saying show your understanding of portability of theory related to the gaming theory.

238. Show your understanding of the gaming theory related to independency of theory. This is the same as saying show your understanding of independency of theory related to the gaming theory.

239. Show your understanding of the gaming theory related to importance of theory. This is the same as saying show your understanding of importance of theory related to the gaming theory.

240. Show your understanding of the work theory related to instrumentation theory. This is the same as saying show your understanding of instrumentation theory related to the work theory.

240′. Using Show your understanding of the work theory related to instrumentation theory. This is the same as saying use algebra show your understanding of instrumentation theory related to the work theory.

241. Show your understanding of the work theory related to the theory of marketing. This is the same as saying show your understanding of the theory of marketing related to the work theory.

242. Show your understanding of the work theory related to the exchange system. This is the same as saying show your understanding of the exchange system theory related to the work theory.

243. Show your understanding of the work theory related to the gaming theory. This is the same as saying show your understanding of the gaming theory related to the work theory.

244. Show your understanding of the instrumentation theory related to the exchange system theory. This is the same as saying show your understanding of the exchange system theory related to instrumentation theory.

244′. Use algebra to show your understanding of the instrumentation theory related to the exchange system theory. This is the same as saying show your understanding of the exchange system theory related to instrumentation theory by using algebra.

245. Show your understanding of the gaming theory related to the exchange system theory. This is the same as saying show your understanding of the exchange system theory related to the gaming theory.

246. Show your understanding of the information theory related to the exchange system theory. This is the same as saying show your understanding of the exchange system theory related to information theory.

247. Show your understanding of the theory of marketing related to the exchange system theory. This is the same as saying show your understanding of the exchange system theory related to the theory of marketing.

248. Show your understanding of the exchange system theory related to the theory of communication. This is the same as saying show your understanding of the theory of communication related to the exchange system theory.

248′. Use algebra to show your understanding of the exchange system theory related to the theory of communication. This is the same as saying show your understanding of the theory of communication related to the exchange system theory by using algebra.

249. Show your understanding of the theory of marketing related to the theory of communication. This is the same as saying show your understanding of the theory of communication related to the theory of marketing.

249′. Use algebra to show your understanding of the theory of marketing related to the theory of communication. This is the same as saying show your understanding of the theory of communication related to the theory of marketing by using algebra.

250. Show your understanding of function and system relationship related to the physical system. This is the same as saying show your understanding of the physical system related to function and system.

250′. Using algebra to show your understanding of function and system related to the physical system. This is the same as saying use algebra to show your understanding of the physical system related to function and system.

251. Show your understanding of function and system relationship related to the functional system. This is the same as saying show your understanding of the functional system related to function and system.

251′. Using algebra to show your understanding of function and system related to the functional system. This is the same as saying use algebra to show your understanding of the functional system related to function and system.

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